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STREET SCENE IN PEKIN



GREAT WALL



CHINESE TOMB

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AT A meeting of the associates of the late William Saunders, held in the office of the Secretary of Agriculture, the following resolutions were adopted:

"In the death of Mr. William Saunders the Department of Agriculture has lost a faithful and efficient officer, and American agriculture and horticulture a true and trusted friend. As superintendent of the gardens and grounds of this department for thirty-eight years, and as a promoter of many important agricultural and horticultural lines of work, Mr. Saunders' name has become famous throughout the land. His ability as a landscape gardener was universally recognized, and his knowledge of plants from a strictly economic standpoint was of a most thorough kind. The beautiful department grounds are a monument to his skill, and some of the most choice varieties of fruits which now bless our country are the result of his keen insight into horticultural work.

"Mr. Saunders was a man of sterling honesty, manifesting a strong interest in the progress of our country and the advancement of the man at the plow. In his desire to benefit the farmer he was the organizer of the Patrons of Husbandry, or National Grange, and a number of other associations which have had a marked influence on the country's welfare.

"To the world Mr. Saunders was noted for his strong convictions as to what was right. A good husband and father, an estimable citizen, his loss will be felt by all who knew him."

The following brief sketch is from a monthly publication of the Department of Agriculture:

"Mr. William Saunders, for thirty-eight years superintendent of the experimental gardens and grounds of the United States Department of Agriculture, died at his residence in Washington, D. C., September 11th, at the age of seventy-eight years.

"Mr. Saunders was born at St. Andrews, Fifeshire, Scotland, in 1822. After

a course of practical instruction under noted horticulturists in Scotland and England, and a visit to India, he came to the United States in 1848. For several years afterward he was engaged in general, ornamental and landscape gardening in various cities, and was one of the most frequent contributors to the horticultural journals. In 1862 he accepted an appointment in the Department of Agriculture, and his subsequent continuous services to that department and to the varied agricultural interests of the country at large will always remain a fitting monument to his memory. Not less will he be remembered as the designer of Fairmount Park, Philadelphia, the park surrounding the Lincoln monument at Springfield, Illinois, and the magnificent National cemetery at Gettysburg. In 1867 he became especially prominent as the founder of the Patrons of Husbandry, more commonly known as the Grange. At its first meeting in the city of Washington, D. C., December 4th of that year, he was honored by election to the highest office in the gift of the order, which he held for three years."

THE "Crop Reporter" for September contains the following abstract of an article by Editor George W. Hill:

"Just as agriculture," the writer says, "is more than any other industry the basis of our national prosperity, so of all our national departments that of agriculture can be shown to be foremost in adding indirectly to the wealth of the country. More than this, however, it may be shown to add steadily and directly to the nation's wealth, and that in numerous ways and to an extent which the average American citizen does not begin to appreciate."

"To illustrate this, Mr. Hill cites many well-known examples by which the aggregate product of our agriculture has been increased and diversified directly through the instrumentality of the Department of Agriculture. The material wealth of the country has been greatly augmented by the introduction of Fultz wheat, sorghum, rust-proof oats, alfalfa and various forage plants. The Bahia, or Navel, or seedless, orange, a source of almost incalculable wealth to the Pacific slope, owes its adoption in the United States solely to the department. The ravages of the scale-insect, which at one time threatened to annihilate the orange industry of California, was finally checked through the introduction from Australia, and the propagation in California, of the Australian lady-bird, the most active destroyer of scale-insects. A later service to the California fruit-growers has added one hundred and fifty per cent to the value of the fig crop by the introduction of an insect which fertilizes the Smyrna fig with the pollen of the celebrated Capri. Of the \$400,000,000 which is estimated as the amount of damage threatening all the crops of the United States through insect pests, it is believed that fully one fourth is averted by means of remedies and preventives discovered by entomologists of the Department of Agriculture.

"The introduction of an improved variety of Japanese rice has already added \$1,000,000 to the value of our domestic rice crop.

"Turkestan alfalfa promises, owing to its cold-resisting attributes, to be of great value in latitudes too cold for other forage crops of similar species.

"The increased production of vineyards through the treatment with fungicides recommended by the department has been attested by numerous vine-growers.

"In the case of potato-rot an increase was found in the yield of the treated over the untreated of twenty-two to fifty per cent, and at a trifling expense.

"The extirpation of contagious pleuropneumonia of cattle was the result of unceasing effort on the part of the department authorities. The value of this service to the country is inestimable. Likewise a saving to the country of from \$5,000,000 to \$6,000,000 every year has been effected through the pre-

vention of the cattle disease known as black-leg, by vaccination. Other diseases of animals are being investigated, and in many cases serious losses have been prevented, while reduction in maritime insurance on live cattle, as the result of the department's supervision and control of cattle-carrying vessels, saves to shippers over \$2,000,000 a year.

"Improved methods have been introduced among the sugar-growers of Louisiana by which the value of the cane-sugar crop was greatly enhanced; and in the promotion and encouragement of the beet-sugar industry the department has also played an important role.

"Through the weather bureau warnings of frost and storms have permitted precautionary measures for protection of crops and of perishable products in transit, and the removal of valuable property to places of safety, thus affecting savings aggregating millions of dollars annually. Every year many ships and their cargoes of valuable merchandise are saved as the result of the weather bureau's warnings to mariners.

"Mr. Hill concludes by saying: 'It would be easy to greatly multiply these instances of direct saving or of money returns resulting from the various lines of work undertaken by the department under the organic law which authorizes, and indeed requires, the Secretary of Agriculture to acquire and diffuse by every means at his command information of value to agriculture in the most comprehensive sense of that term.'"

TREASURY figures show that there has been a rapid development of trade between Porto Rico and the United States since the new act went into effect on the first of May last. Imports from the island have increased fifty per cent, and exports to the island have increased nearly one hundred and fifty per cent, over those of one year ago. Imports are three times the average, and exports are nearly five times the average, when Porto Rico was Spanish territory.

In an interesting letter from Capt. William H. Elliott, Commissioner for the Interior Department of Porto Rico, the present conditions of the island are set forth as follows:

"The period of military government in Porto Rico was a trying one, but just when it appeared that the time of waiting for government to get together and move on, and the approaching harvest of coffee and fruits gave promise of business revival and plenty for the poor to eat, the awful hurricane of August 8, 1899, came, with death and destruction in its wake, carrying desolation and woe to every part of the island. The history and effects of that calamity are well known. Suffice it for present purposes that the military government successfully coped with the situation and for a year fed the poor with rations furnished by the War Department. It was noble and generous to thus provide for the needs of the people, but the wisdom of giving without requiring a return in labor admits of grave doubt. Certainly the state of affairs produced by the policy has added many burdens and perplexities to the civil government.

"The conditions above enumerated, and others, confronted Governor Allen on inauguration day. They are yet being wrestled with, and at best will but slowly be overcome. Nevertheless there has been progress all along the line, and now that the flurry caused by the exchange of provincial money, current only in Porto Rico, for United States money, as good as gold the world over, has practically subsided, and the commercial community knows where it stands, there are unmistakable signs of confidence and renewed life. The new government, now fully equipped with a head of every administrative department, and the courts in motion, is meeting the expectations of the people in every respect. True, its hands are tied by a mixture of old Spanish laws and

military orders, but the executive council is arranging for the election of a legislature which will be prompt to take up matters of importance and enact some wholesome laws.

"The receipts from customs have largely exceeded the most sanguine expectations of the officials; the internal-revenue system has been worked up to a most satisfactory state of efficiency; the treasury is always able to meet every legal demand and yet show a respectable balance of cash on hand, and the people are well pleased with the outlook. Ask an intelligent Porto Rican what he thinks of conditions now as compared with the situation under Spanish regime; whether it is his opinion that the fifteen-per-cent tariff is oppressive, or that the people are being swindled in the exchange of money, and he will invariably reply that there is no ground for complaint or criticism.

"No one need lose sleep from worry over his fellow-citizens in Porto Rico. They perfectly understand the purport and duly appreciate the benefits possible under the Foraker law. They fully understand the fact that the future weal or woe of the island depends upon its own people. They know that they, through their chosen representatives, are to make the laws for their own government, and they propose to make as few mistakes as possible. They realize that deliverance from the thrall of Spanish laws rests with them now, and that by the exercise of wisdom, good judgment and consideration of the rights of the people and the wants of the island there can be speedily established in Porto Rico a model government, under which prosperity and happiness will reign supreme."

IN AN article in the "North American Review" for August entitled "America's Duty in China" the Hon. John Barrett says:

"Expressed briefly, the main planks in our Chinese policy might be stated as follows:

"The United States desires, and should take, no port, province or part of China, either as a sphere of temporary influence or as an area of actual sovereignty.

"The United States should oppose, with all its moral, political and diplomatic influence, any partition of China among the foreign powers, or any delimitation of acknowledged spheres of influence.

"The United States should insist upon the permanent maintenance of the trade principle of the open door, as outlined in the present Chinese treaties, throughout all China, by all the powers endeavoring to exercise influence within her limits.

"The United States, provided the dissolution of the Empire is inevitable, despite our best efforts of diplomacy and moral suasion, should insist upon the guarantee, by formal convention, of the open-door principle in all the various areas of foreign sovereignty in China, and will carefully guard against excuses for discriminating duties, national rebates or subsidies, and special freight charges—for the consuming powers of an increasing population of four hundred millions of people and the material development of four millions of square miles are involved.

"The United States, acting with charity and equity and in no spirit of vengeance, should employ all its moral and material influence in prescribing just punishment and indemnity for loss of life and property at the hands of fanatical and insurrectionary mobs; in adjusting the true moral responsibility of the overwhelmed government; in establishing permanent order and honest progressive administration of government throughout the Empire; in safeguarding, both for the present and the future, the lives, rights and holdings of missionaries, merchants and other foreign residents; and, finally, in so preparing the way for peace, order and prosperity, to be followed by liberty, justice and freedom under the guiding direction of Christian civilization, that we shall win the lasting gratitude of the countless blameless Chinese and make them forever our disciples in moral and material progress."



No End of Belgian Hares

The interest in the Belgian-hare business is not only not on the decline, but steadily increasing. Poultry, fancy or otherwise, is not in it any more. Everybody who comes to visit me asks, first of all, to see the Belgian hares, although at present I have only very few, because there was an urgent demand for every animal I thought I could spare. The New York "Farmer" in one of its late issues asks: "Isn't the Belgian-hare business overdone?" In a measure it is. When people demand or pay two hundred dollars, and even five hundred dollars, for a pair of these animals, no matter how many points they score, I believe the thing is decidedly overdone. But every one to his taste. If there are persons who have plenty of money, and wish to spend it for a rabbit that has a white hair or two less on its hind leg than other rabbits, that is their business, not mine. I know that the flesh of the three dollars a pair Belgian hare is exactly as good as that of a two hundred dollars a pair. As long as I raise them mostly for my table the good ordinary stock (meat stock, as Mr. Nicholls calls it) is good enough for me.

Rabbit Diseases

It is said that the Belgian hare is singularly exempt from disease. The few ailments to which they are subject are said to be caused mostly by improper feeding. But I do wish that somebody could tell me why my young stock die off in a fearful manner at an early age, sometimes even while yet suckling the doe. There is no outward sign of disease. All at once they begin to mope around, then stretch out and die, and that is all there is to it. I have kept both old and young on dry feed and on green feed, with and without water, largely on a grain diet, and then again more largely on roots and grasses, etc. But no matter what I have been feeding, the result was the same, until I hardly know what to do in order to bring my young stock through to maturity all right. Old rabbits will occasionally die, but they seem to be quite hardy and rugged in a general way. Can any one tell me about this fatal disease?

Pan-American Exposition

In the issue of May 1st I promised to the readers of FARM AND FIRESIDE to report from time to time about the progress of the work on the exposition grounds, especially of planting the grounds, setting large trees, etc., but up to this time I have had my hands so full looking after my fruit and vegetable crops that I have seen the grounds thus far only from a distance. While making my weekly trips to the city (Buffalo) on the Buffalo and Niagara Falls electric road I can now see the great towers of the larger buildings, especially the electric tower, looming up in all their majesty. Soon I will be able to redeem my promise and tell about what is going on.

Fertilizers for Wheat

The Ohio Agricultural Experiment Station has just issued a press bulletin (No. 216), discussing the question of "Fertilizers for Wheat." It says: "In the tests of the Ohio Experiment Station, phosphoric acid, in the form of acid phosphate, has been decidedly the chief factor in producing an increase of crop during the season just past. A similar result has been reached by many farmers, and the natural consequence is a general tendency to limit the use of fertilizers the coming season to plain acid phosphates, a tendency strengthened by the fact that the phosphates are not so completely under the control of the fertilizer trust as are the mixed fertilizers."

It is quite a number of years ago when I first pointed out in these columns that phosphatic fertilizers may be expected to give excellent results for a year or two, in cases where grain crops

have been taken off the land for years in succession without the return of plant-foods in phosphatic fertilizers. But if we often can, and do, obtain a considerable increase of the grain crop by the application of superphosphates we must not conclude that we can go on and secure the same results by the same means for an indefinite length of time. This case is a parallel one to the increase of crop (clover, corn, etc.) by the use of land-plaster. This latter may for a time help to make unavoidable mineral plant-foods soluble, and thus give increased yield. But it also helps to take the last remnants of potash and phosphoric acid out of the soil, and in the end make the latter unproductive. To continue producing good crops in proper rotation you will have to provide the two mineral plant-foods by proper applications and with the use of clover crops, which bring these plant-foods from the subsoil up to the top and put them within reach of the roots of ordinary grain crops, the latter means also supplying nitrogen from the air.

In regard to compounding a fertilizer for wheat grown in rotation with other ordinary farm crops the bulletin has the following to say:

"When, however, the experiments at the Ohio station are studied as a whole, taking not simply the effect upon the present season's wheat crop, but the average results upon wheat, corn, oats and grass for the past seven years, it will be seen that it would be a decided mistake to base conclusions upon this one wheat crop alone.

"In the experiments of the central station at Wooster, where wheat has been grown in rotation with corn, oats, clover and timothy, the average increase an acre from plain acid phosphate, applied at the rate of 160 pounds an acre to wheat and 80 pounds an acre to corn and oats, or a total of 320 pounds during the five years of a rotation, has been 4.6 bushels of wheat, 3.6 bushels of corn, 7.2 bushels of oats and 500 pounds of hay; while from the same quantity of acid phosphate, carried partly in acid phosphate and partly in tankage, but reinforced by the nitrogen carried in the tankage and by a small addition of muriate of potash, the average increase has been 7.2 bushels of wheat, 8 bushels of corn, 8 bushels of oats and 1,600 pounds of hay.

"The cost of the acid phosphate used on an acre in five years has been about \$2.40, while that of the mixture of acid phosphate, tankage and muriate of potash has been about \$3.75; but the average increase from this mixture has been so much greater than that from acid phosphate alone as to give a total net profit, over the cost of the fertilizer, of about \$12 an acre in five years for the mixed fertilizer against about \$6 for the acid phosphate used alone.

"In mixing this fertilizer, '7 and 30' tankage and 14 per cent acid phosphate are used in equal quantities, adding about 100 pounds of muriate of potash to the ton. This gives a fertilizer analyzing over 3 per cent ammonia, 10 to 12 per cent phosphoric acid and 2½ per cent potash, and may be made up at a cost of \$18 to \$20 a ton."

Growing Basket-willows

On a rented farm not far from my home I used to have a willow hedge perhaps ten rods in length, and year after year I sold the wood (on the stump) to a basket-maker in the neighborhood for five dollars. He did all the trimming and cutting and carting, so I had no expense from it whatever. It seems to me that at this rate a plantation of basket-willows would be very profitable. But as for myself, I have no experience in planting and caring for the crop, and so am unable to tell my friend G. F. H., of Clark county, Wisconsin, about the business. But undoubtedly there are many among the FARM AND FIRESIDE readers who have the experience and can tell us about it.

Sawdust for Mulching Strawberries

A reader in White Deer Mills, Pa., asks me whether I consider sawdust a good covering for strawberries, and whether it would be of benefit or an injury to the land. He can get tons of it for the hauling. It is composed of pine, chestnut and rock-oak, and well rotted, as it has been lying on a large pile along a creek for twelve or fifteen years; also what is its fertilizing value compared with dry forest-leaves. Such sawdust makes a good enough mold for heavy soils, or even for very light sandy ones. It adds humus, which retains moisture, and thus helps plant growth in a dry time even if it does not possess much real plant nutriment. If your team has not much to do in the fall, by all means apply such sawdust liberally around the strawberry-plants as a mulch. I often use it thus in the spring, for the double purpose of retaining moisture and of keeping the berries free from grit and clay. This rotted stuff can be safely put quite thickly around the plants and even lightly over them. They will work through all right after awhile. I have never noticed any ill effects, of applications of rotted sawdust on strawberries, but would be more sparing in the application of fresh sawdust.

T. GREINER.

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SALIENT FARM NOTES

Tenants and Landlords

The many letters that come to me from dissatisfied tenant-farmers would seem to indicate that many landlords are rather too grasping. Many of them do not give the tenant a living chance. They seem to want too much for themselves. Thousands of farms are leased for one half the crop, and the tenant is obliged to sign a skilfully worded contract that binds him hand and foot and compels him to deliver the landlord's entire share in market before he may touch a peck of his own. He is bound as hard and fast as if it were expected of him that he would steal everything that is loose or can be sold. The tenant generally expects to evade in some way the terms of the lease when he signs it. I feel satisfied that a majority of tenants want to be honest, and are honest when fairly treated; but when the landlord is exacting and unfair they are not so particular. One of the most exacting landlords I know of is a man who failed to make a living on an eighty-acre farm, and lost it, but later came into possession of another eighty-acre farm through the death of a relative, and now demands that his tenant shall make a living for two families from it.

An agricultural journal says it notes with satisfaction that every year more capitalists are investing in farming lands, and it thinks this is a good sign of the times. What it really means is more tenant-farmers, more shabby farm homes, more indifferent farming. Years ago, when I was a farm-hand, a wealthy farmer and shrewd politician said to me, "You will probably live to see a large part of the land in the older nations become the property of those who till it, or at least you will see the tiller control the land under such laws as will give him a good share of what he grows and prevent eviction except for just cause. On the other hand, you will see a large area of the farming lands of this country pass into the hands of capitalists, who will tax the tiller every penny he can stand. Then the wrongs of Ireland will be eclipsed by the wrongs of the American farmer." The old man has been gathered to his fathers many years, and I have been noting the trend of events along the lines of his prophecy. In some sections of this country many of the best farms are passing into the hands of capitalists; but other industries still offer greater inducements to investors than farming lands, and as yet I see little danger of a great "landed aristocracy" here.

I note one "sign of the times" that must be considered somewhat inauspicious, and that is the number of men who seem to have given up all hope of ever being able to buy land, and have settled down into the life of a tenant. Their sole ambition seems to be to secure a farm for a year or two on

almost any terms, and having secured it, to get all they can out of it with the least trouble and expense to themselves, and move on. After some years of this sort of life they "quit farming" and move into the nearest village, and in one way and another manage to eke out a rather poor living. Often the wife takes in washing, does house-cleaning or plain sewing, while the daughters become servants, or clerks at a small salary in the village stores. The sons generally strike out for themselves. I know some who are section-hands and brakemen on railways, soldiers in the regular army, miners, and toilers in almost every vocation. Sometimes one or more of a family develop a talent for business or especial skill in some art and rise to a prominent position in the world.

In some instances I find the owners of land are very liberal in their dealings with tenants. They let their farms on terms that give a good farmer a fair chance to make something for himself. Naturally this encourages him, if he is any good, to do the best he can with the farm, and as he knows he can hold it as long as he manages it according to the terms of a very fair contract, and is reasonably prompt in the payment of the rent, he feels easy concerning the future. I have known tenant-farmers who were liberally treated to hold the same farm for fifteen to twenty-five years, and to keep it in excellent condition, never default in payment of rent, and to lay aside a snug sum for old age.

But at best the landlord is an evil in any country. He builds no homes, cherishes no happy firesides, improves neither the people nor their surroundings, and under his blighting influence patriotism dies, because there can be no love of home where there are no real homes. I see nothing to rejoice over in the fact that capitalists are investing in farming land. The more tenant farmers we have the more poor hand-to-mouth people and the more dissatisfaction. Ownership creates independence, fosters patriotism, builds up and hallows the home and begets a noble, virtuous people. The best thing I can suggest to the tenant-farmer is to make a mighty effort to secure five or ten acres of his own on which to build a home. Once get a home and the chief obstacle to success is surmounted.

Native Thicket Building Site

S. S., writing from central Indiana, says: "I have bought three acres of native thicket for a building site, and it is now covered with hazel-bushes, wild crab-apple and other bushes and shrubs, interspersed with patches of blue-grass. There are also a few elms, oaks and black cherries, fifteen to twenty feet high, scattered about. I will have the tract cleared this fall and would like some information concerning what trees and shrubs I should plant to make a pretty home place of it." S. S. has one of those "native thickets" that a good landscape-gardener would consider a perfect bonanza. Very likely he has almost everything necessary for the making of a very pretty home place, and all it needs is careful thinning out, grouping, and possibly a few additions from the nursery. I would leave a patch of hazel here and there, and a few small groups of wild crabs in the background, for there's nothing prettier or sweeter than a wild crab in bloom; and if there are any more of our native flowering or pretty-leaved shrubs I would carefully preserve them. I would leave all of the elms and oaks, but would grub out the cherries and all of the wild blackberries, raspberries and other thorny and worthless vines and shrubs. Then I would plant a white pine or a spruce here and there, and a scattering group of arbor-vitae a little to one side. Then spireas, lilacs, snowballs, weigelas, altheas, calycanthus, sweetbrier, lilies, hardy phlox, etc., singly and in groups here, there and yonder, where they would not be especially conspicuous, but a constant surprise and delight. Above all things I would prize and preserve the "native" features of the site, for they are the best of all.

FRED GRUNDY.

OUR FARM

FARM THEORY AND PRACTICE

THE RENTER.—Partners in any business should have interests identical in character. A partnership of any other sort cannot give the best results. The dissatisfaction that arises from renting land is traceable to the difference between the interests of the man that furnishes the most of the capital—the land—and the one that furnishes the labor. The partnership is an unequal one. The landowner should be most interested in the preservation and increase of his capital, keeping immediate income somewhat secondary, while the renter should be most interested in income, any increase in the value of the land being a very secondary matter with him. It is an easy and usual thing among land-owners to condemn the ways of renters, regardless of the fact that the renter's interest cannot be identical with that of the owner of the land, and that equitable compromise is the very best that any system of renting can afford. The renter must do some things that impair his income, and the owner of the land must permit some things that are not strictly to his interests. It is this difference in interests that is our best safeguard against extensive landlordism in this country, and for this reason I am glad that it exists in the very nature of things. Friction is a good thing when it works against the extension of a system that is bad for a country.

WAYS OF RENTING.—If the owner of land is not a practical farmer, or if he cannot give personal attention to the condition of his farm while in the hands of his renter, about the only safe course is to adopt stock-farming, requiring that all the products of the farm except a limited amount of grain, fruit and vegetables be converted into animal products for the market, and that the manure be returned to the fields in some fixed order. Such a system limits the drain upon the soil to a fixed amount, and keeps the most of the soil's strength at home.

Throughout our Eastern states there is a vast number of farms not adapted to profitable stock-farming whose owners would like to have relief from the exacting details of management on account of age or other sufficient cause, and in these cases renting becomes a puzzling matter. It is difficult to have soil fertility maintained, and it is equally difficult to secure as good tillage as the owner would have given. If the renter is working on the shares, he oftentimes cannot afford to give the extra tillage that would be profitable to the owner. Assuming that a certain amount of work has been done in preparing for a crop, two dollars' worth of extra labor might secure three dollars' increase of crop. If one half or three fifths of the increase is the renter's share of it, the extra labor is done at a loss to him, while the owner, working his farm, could have done the extra labor with profit. Interests are not identical, and the partnership is not fully satisfactory as a rule.

HIRING THE LABOR DONE.—Unless one can rent his farm on such terms that the crops are fed upon the farm, or else can rent to one who has a direct interest in maintaining the fertility of the soil, the cases are comparatively few in which he will not do better either to dispose of the farm or else give it personal attention and hire the labor done. I know that many claim that the profits from farming will not permit the hiring of all labor, but the claim is usually based upon faulty book-keeping. Money now brings a very low rate of interest. An equally good rate can be secured from a farm on which the labor is hired, provided the soil is good enough to permit a renter on the shares to live on his share. He cannot do the work for nothing, and will not do so. He must have at least sufficient from his share to make fair manual wages for himself and his hands. If the owner of the land is a capable manager he should make the renter's usual share of the crop pay the labor bill, and his direction of the labor should be such that the remainder of the crop or the im-

proved condition of the farm would have greater value to him than the usual income from rent. I base this statement upon careful accounts with my crops and fields and upon the obvious fact that the renter's usual share, under conditions unfavorable for the best results from farming, amounts to more than the bare labor bill of the farm. When the owner keeps the direction in his own hands, and applies each dollar's worth of labor with skill, he should make a farm more productive than a renter can afford to do, because the latter must divide the proceeds from all extra tillage and care. The trouble is that we mix up our living expenses with the cost of our crops, and then figure out no interest on our investment.

TOO MUCH LAND.—One of the greatest evils of our business is the desire for too many acres. It is not safe to say that a majority of farmers need more cash capital and a corresponding less number of acres of land. It is personal attention and study that make an acre of land yield income. Too many farmers are handicapped by small cash capital in the management of a large area of land. A small amount of labor cannot be applied with economy to a big acreage. It is concentration that gives desired results. Life is made a struggle for many a farmer by the desire to hold or get more acres of land than he can manage and work with ease. Wealth is not truly measured by the amount of capital invested, but by the income. A small farm well improved and well tilled or stocked is a comfort and a source of income, while far too often a large farm taxes all one's energies without proper compensation. Measure the farm not in acres, but in bushels, in tons, in dollars of net income. And above wealth, or the hope of wealth, place comfort and the rational enjoyment of life.

DAVID.

POISON-IVY

The condition under which the poison-ivy flourishes seems to be present everywhere—north and south, east and west. It is a great nuisance wherever it appears, often covering fences and buildings. The best time to fight this plant is in the early springtime before any of its foliage has developed. It may then be grubbed out and handled without the fear of its poisoning any one. The vine is apt to make roots wherever it touches the ground, and for this reason it is a tedious task to eradicate it.

During the hot season the poison of this plant has a most unpleasant effect upon some people, as swelling of lower extremities and arms, itching to set one crazy, and breaking out of the skin. I have suffered intensely with it a number of times. Some individuals are so sensitive or receptive to this poison that the mere passing by without touching any part of the plant will bring about the results named.

I have tried many different remedies to stop the terrible itching, and I have found nothing more effective than sweet-oil and carbolic acid, in the proportion of three to one, poured together and well shaken, applied several times a day. Many other home remedies, like butter-milk wash, etc., have not afforded me the least relief.

A vine of similar appearance and habits is often mistaken for the poison-ivy. Some call it woodbine, others Virginia creeper; etc., but this vine is entirely harmless and may be used for covering the sides of buildings, verandas and the like. I herewith present a leaf of each of the two vines. The poison-ivy leaf is three-fingered, the other is five-fingered. This mark alone is sufficient to distinguish the one from the other.

F. GREINER.



THE AGRICULTURAL OUTLOOK

In this hurrying, bustling age the busy farmer is ever grateful for condensed statements of facts—historical or otherwise—which relate directly to the important occupation in which he is engaged. The American farmer will ever be grateful for the Morrill Act, approved May 15, 1862, creating the Department of Agriculture, and for the subsequent action of the national Congress in the establishment of the present system of state and territorial experiment stations, which action was subsequently approved by the president March 2, 1887. These dates mark a new era in agricultural progress, and might well be made equally as worthy of special commemoration by American farmers as others that are annually observed as national holidays.

By far the most interesting compilation of facts relating to the progress of agriculture in the United States that has recently appeared is to be found on pages 307 to 334 inclusive in the Agricultural Department Year-Book of 1899. It was prepared by Mr. Geo. K. Holmes, assistant statistician, who is ever on the lookout for facts that are likely to be serviceable to the progressive American farmer. While but twenty-seven pages are devoted to primitive and improved methods of agriculture and to necessary statistical statements, it constitutes a bulletin that is as full of facts and suggestions as an "egg is of meat."

Beginning with a statement of the crude agricultural methods of the Indians before the country was inhabited by the white race, the subsequent dates of the introduction of the various agricultural products are given, also those of the different improved breeds of animals. Not the least interesting feature is the date of introduction of the most crude and of the latest improved machinery, showing the remarkable progress that has been achieved along these lines. As stated, "The development and creation of agricultural implements and machines by the inventive genius of this country is one of the most remarkable features of progress of the century." This development has been encouraged by the patent laws of the country, and perhaps nothing could be more tersely expressive of the influence of these laws than the number of patents that have been granted. By means of mechanical contrivances human labor has been very largely supplanted and the cost of production correspondingly reduced. As a result the farmer's gross income has been increased and his life has been made an easier one than before the present perfection in farm machinery was attained.

Some of the economic results of the use of improved machinery and methods of cultivation are shown by the following terse statements:

"Between 1855 and 1894 the following changes took place in the cultivation of corn. The time of human labor required to produce one bushel of corn on an average declined from four hours and thirty-four minutes to forty-one minutes, and the cost of human labor to produce this bushel declined from thirty-five and three fourths cents to ten and one half cents.

"It is one of the marvels of the age that the amount of human labor now required to produce a bushel of wheat from beginning to end is on an average only ten minutes, whereas in 1830 the time was three hours and three minutes. During the interval between these years the cost of human labor required to produce this bushel of wheat declined from seventeen and three fourths cents to three and one third cents.

"The more noticeable economy in hay-making is in the mowing and curing of the grass. In these two operations the time of human labor declined a ton from eleven hours to one hour and thirty-nine minutes, while the cost of human labor declined from eighty-three and one third cents to sixteen and one fourth cents.

"The comparisons might be extended throughout many of the crops produced by the farmer, with a constantly recurring illustration of the saving of human labor and of the diminution of the cost of production by the diminution of human labor."

The census group of occupations em-

braced within agriculture, fisheries and mining is represented by 49.11 per cent in 1870, or nearly one half of the persons having gainful occupations, and fell to 39.65 per cent, or about two fifths in 1890, and is likely to be hardly more than one third at the time of the twelfth census (1900).

The census reports now being tabulated will no doubt afford valuable information, which, when properly compiled, will indicate to the progressive farmer what are likely to be the most profitable lines of production during the next ten years. The remarkable advances made in farm-gardening and fruit-growing in the United States since 1890 is an indication that a great change is in progress of development which is likely to be continued in an accelerated ratio. The problem of production and consumption is one of the most important that the American farmer is likely to be called upon to consider seriously before the close of the present century. The rapid increase in the numbers to be fed who are not engaged in agricultural pursuits, which is shown by recent figures, adds interest to the question of production and consumption of agricultural products.

J. W., JR.

2

MORTGAGE-LIFTERS

It is interesting to read the different articles which are from time to time published on this subject. The problem of the age, "How to get out of debt," has received many solutions; and after all, when it comes to the final analysis, the man is the prime factor. Upon him and upon his characteristics depend the question of debt-paying. The best farm in the world managed as some men manage their business would prove a failure. Location, opportunity, soil, these are all incidentals. The man tells the story.

The man and his wife, I should have said. I believe in giving the wife credit for her part in clearing up the old debts and putting the farms of this country on a paying foundation. Not always does she receive this credit. The man writes the article for the paper, telling all about how he cleared the farm from encumbrance, and the man gets his picture in the farm journal. But where is the woman? Ah! far too often she goes without notice or remembrance. And yet her hands are just as deeply seamed with toil as those of her husband. She has always borne her share of the burden and heat of the day. She goes to bed later than her husband, for there is always something she must do after her husband has finished his work and comes in for the day. It is by her advice and her counsel and often by her manual exertion that the farm has done as well as it has.

I know a woman in my own township who has lifted a farm out of debt herself, alone and unaided except so far as the heaviest field labor is concerned. Her husband died some years ago, leaving her a feeble woman to go on with the farm. Right nobly has she done this. Planning everything herself, she has kept the machinery in operation, until to-day she has the satisfaction of seeing the last debt paid up and everything comfortable about her. If she had been endowed with the degree of health which some women have she would have made the world move.

We might all be better farmers than we are. The principles are few, but they are insistent. Attention to business is a prime requisite. Nothing will take its place. Thoughtful management comes next. Without that we invite failure. It is not waste of time to read and study. Farming is a science. Most of us are trying to make ourselves believe this is not so. It is at our own expense we do it. It is not grind which accomplishes it all. The stone which is kept grinding soon wears out. There is as much in knowing when to stop bearing on as in keeping at it. Rest when you need rest.

Mortgage-lifting is a most satisfactory business when made a means and not an end. The end should be a long life of comfort and happiness after the last cent of debt has been paid. If we are broken down by the time we have paid the mortgage off all we have accomplished is not worth while. We have only sold our lives, and sold them at a low figure.

E. L. VINCENT.

NOTES FROM GARDEN AND FIELD

POTATO-SCAB.—J. P. M., a reader in Merrill, Wisconsin, asks me whether his next crop of potatoes will be liable to be scabby if grown on a piece of sod-ground manured this fall. It depends on the potatoes used for seed and on the manure. Usually old sod-ground is free from the scab fungus. If it is a little acid (for which you may apply the litmus-paper test) the resulting crop will be free from scab even if infection was carried into it by the seed or manure. If it has an alkaline reaction, however, you must be careful about the seed and the manure you use. Most potatoes that I use for seed have more or less scab on them, and if planted without previous treatment for scab and in soil favorable to scab will surely produce scabby tubers. The only safe way is to subject them to the regular treatment for scab, which consists of immersing them for ninety minutes in a one-mille solution of corrosive sublimate. The scab fungus can subsist and live for years in the manure in the soil. If cattle, horses or hogs are fed with raw potatoes or potato-peelings their manure is liable to be scab-infected, and if applied in fall or spring to alkaline soil will carry the infection into such soil and surely make the next crop of potatoes scabby. If the manure, however, is absolutely free from scab-infection—that is, coming from animals that have not been fed on raw potatoes or peelings at any time while the manure was made—it may be safely applied to the land in fall or spring or at any other time.

* * *

MUSHROOM-SPAWN.—L. G., of Green Bay, Wisconsin, asks if there is any way to prepare or preserve spawn out of a mushroom-bed that is in good bearing condition. Of course there is a way. In fact, the whole bed is a lot of spawn, and all you have to do is to let it (or a portion of it) dry down, and use pieces of it in the same manner as you would the brick or flake spawn purchased from a seed-dealer. I have frequently started new beds with chunks of the manure taken out of an old bearing bed.

* * *

ONIONS AT THE SOUTH.—Wm. P. W., of Disston City, Florida, reports as follows: "I sow my seed as early in the fall as it is possible to procure the true Bermuda seed. This is the only safe onion to grow here, although I have grown the Australian and Prizetaker in small quantities. About October 10th is as early as I can get the true Bermuda seed. I grow the plants in the seed-bed until they are the size of a lead-pencil at the ground, then transplant into rows eighteen inches apart, and six inches apart in the rows. I keep the bed clean with a hand wheel-hoe and never miss growing a good crop."

* * *

SODS FOR COMPOST.—W. D. C., of Toronto Junction, Ontario, wants me to tell when is the proper time and the best way to cut and pile up sods for the purpose of making a compost for the flower-garden. The sods should be gathered and piled up as early in the season as possible. It takes time for sods to rot, and the warm season is the most favorable time for it. I usually try to do this work in July. The best way, I believe, is to plow a piece of old pasture or cow-yard rather shallow (say not over three inches deep), and then pick up the sods and cart them to a suitable place near the barn or greenhouse, where they are piled up with alternate layers of coarse manure. For rose-beds the sods alone will make the best soil. Make the pile square and as high as required, say three or four feet. Then keep the pile moist all the time, if possible, by pouring manure-water over it from time to time. If the sods are not rich it would be well to sprinkle a generous amount of poultry manure over every layer of sod in making the heap. A little bone-meal (or some superphosphate, and perhaps some wood ashes) added in the same way will usually make the resulting compost all the better. Cut the whole mass down with a spade, and work it over from

time to time until the whole is well mixed and uniformly fine. This will make an excellent soil for all sorts of flowering plants by another spring.

* * *

ONIONS FROM SEED OR SETS?—One of our readers, A. G. Chase, M.D., of Kansas, writes me as follows: "For years I have raised my onions from what I call bottom sets. From lack of proper care the top-set onions have become almost worthless, breaking up into two or three pieces when the outer skin is removed; and, besides, the top-set onions will not keep so well as the bottom-set onions. The way I grow the bottom sets is to prepare a first-class seed-bed of a size to suit my wants, by forking over several times, to fine it, at the same time working in a liberal allowance of hen manure and wood ashes. I mark off the rows eight inches apart and an average of two thirds of an inch deep, and sow seed of Yellow Danvers, Red Wethersfield and Silver-skin about the first of May in this latitude. I sow from ten to fifteen seeds to the inch. If the weather is dry I water the bed once a week, using plenty of water. They will ripen about July 1st to 15th, and the sets ought to be from one fourth to one half of an inch in diameter. Then I pull, and spread in the sunshine on a wire netting until thoroughly dry, and keep in a dry, cool place. A bed six feet square will raise about six quarts of sets. I put these into the ground next spring, and if I do my part I will raise sound fine onions. Once in awhile an onion here and there will go to seed, but only when the set is very large. I have been transplanting seed-onions for twenty-five years, just as I do cabbages, etc. But the trouble out here in growing merchantable onions in one year is that August and September are usually too dry for them to make good-sized bulbs."

* * *

There is no question that one can grow better onions from bottom sets than from top sets. The latter are not used to any great extent anywhere that I know of. I have not planted any of the latter for many years. By using small bottom sets, even of the Prizetaker onion, very good dry bulbs may be grown. I find it easier to grow them from seedlings, however, and for that reason make use of the bottom sets only for growing first-early green or bunching onions. Even these, when intended for later use and marketing, are more easily grown from transplanted seedlings. It is some trouble to grow the sets, and a good deal of trouble to winter them. Prizetaker sets, however, seem to keep just as well as any other set. They should be small, else they are liable to run up to seed, and for that reason I sow seed even more thickly than suggested by my friend in Kansas. For set purposes I prepare the ground, preferably a somewhat sandy piece, in the same way as I do for onions, and drill in the seed in rows a foot apart at the rate of one ounce to each sixty or seventy-five feet of row. The treatment recommended by Mr. Chase is all right. My Gibraltar onions this year again "are a sight," although not as large as I expected they would grow. They are as large as the market will stand, however, and they are the most beautiful, the sweetest and mildest onions grown anywhere that I know of. I have them on the table (sliced, and sometimes served with vinegar, etc.) almost every meal, and the family eat them as they would things as mild as apples. They are simply delicious. I like to see August, and September rather dry. When the seedlings were started under glass in January, February, or even in early March, and transplanted promptly to open ground in the way we do, my onions mature in August, and may then be pulled and cured. Dry weather is just what we want for that business. Of course, my aim is to put the dry bulbs on the market as soon as possible. I often pull them up and then cut tops and roots off and put the bulbs up in baskets for sale. If my Kansas friend will start his onion seedlings early enough I think he will have no difficulty in getting fine large bulbs before the usual dry weather in August and September can check their growth.

T. GREINER.

ORCHARD AND SMALL FRUITS

CONDUCTED BY SAMUEL B. GREEN

GRAPES BY FARMERS OF THE NORTHWEST

If planted on a warm, southern exposure, and given winter protection by laying the vines down at the beginning of winter, and covering them with earth or a mulching of straw, prairie-hay or evergreen boughs, and given but little more care than is required for ordinary farm crops, a number of varieties of grapes may be successfully grown upon a majority of the farms in Wisconsin, northern Iowa, southern Minnesota and South Dakota; and owing to the greater amount of heat and sunshine prevailing between the first of June and the middle of September their flavor and quality are superior to those of the same varieties produced in the middle and eastern states.

The best varieties for general planting are Moore's Early, Campbell's Early, Early Victor, Worden; and Delaware, Concord, Brighton, Moore's Diamond and Niagara succeed very well except in locations subject to early autumn frosts. If they are started right, given as much cultivation as is required to raise a good corn crop, pruned and laid down in the fall, taken up and tied to trellises in the spring, and weeds and grass kept out, they will flourish and bring annual crops for a great number of years. The regular annual pruning should be done in the fall after the foliage has been killed by frost and all danger of buds starting again is past (usually the last of October and early November). As the vines are pruned they may be bent down to the ground ready for covering, but should not be covered until winter is about ready to set in. Two-year plants from cuttings or strong one-year-old layers are the best for planting, and plants set out the present spring should not be allowed to grow but one cane this season, all others that start being rubbed off as soon as they appear; and the pruning this coming fall will consist in cutting that cane back to an inch above the two or three lower buds.

The second year two canes are allowed to grow from each plant, and all other sprouts are to be removed as they appear, giving preference to the two lower ones that start. The process of pruning such vines the second year consists in cutting one of these canes back to about four feet, to form an arm to tie to the lower wire of a trellis, and the other to two or three buds above the union with the older wood. On this arm next year four or five canes are allowed to grow, and from the short spur two only. The fall pruning of the third year consists in cutting one of the canes grown on the short spur back to two or three buds, and the other to about four feet, to form another arm to tie down to the trellis, and the canes upon the four-foot arm are to be pruned back to two good buds. The next, or fourth, year about four canes are to be allowed to grow on the younger arm; two may be allowed to grow from each spur on the first, or older, arm, provided the vine is strong enough to support them, and these will carry some fruit, but should not be allowed to carry too much. One to two clusters to each will be sufficient. The pruning this fall consists in cutting the canes on the younger arm down to two or three buds, and cutting away all of the canes on the older arm down to the one nearest the base—or if the vine is very strong, to two above the base—leaving the upper one two or more feet long and the lower a spur of two buds. The next year the vine is fully established with plenty of bearing wood all near the base, where it should be kept by judicious training. The after-pruning each year will be to prune the lower cane grown from the spur at the base to two buds, and the other to three or four feet, and remove entire the longer cane with its branches down to an inch of the base or union with older wood. If at any time either of the arms become injured or lose their spurs they may be removed and renewed by bending down the longer canes grown near the center and tying them to the trellis and treating them

the same as the original arms were done. By these processes the vine is kept within control and prevented from growing an excess of barren wood. Where the vines have not been properly grown from the start, and several canes are growing from the root, it is not an easy matter to give directions for pruning. If two yearling canes can be found containing good buds it will be best to cut the remainder of the canes away and make arms of these. Most excellent results are sometimes obtained by cutting away all of the older wood, leaving only four or five canes of the current year's growth, and this back to four feet in length. As they fruit next year raise one cane from the lowest bud to take their place the following year in the fall, pruning back to about four feet, cutting away down to an inch above the cane with its side branches that fruited this season. These canes should be kept tied to the trellis in fan-shape during the summer.

2.

INQUIRIES ANSWERED

Raspberries Bearing Second Crop.—J. H. S., Freeport, Pa., writes that he has a curiosity in the form of a black-raspberry bush which is very healthy and bore well in its season, and has put out an abundance of young shoots, three of which have each from ten to fifteen berries now ripening (August 18th). He desires to know if such an occurrence is common.

REPLY:—There are one or two varieties of blackcap raspberries that produce some fruit during the entire summer, but it is not uncommon with all the varieties in some seasons to hear fruit on some of the young canes during the late summer. This is caused by some check to the growth by drought or other cause in early summer.

Fall-planting Strawberries in Wisconsin.—E. A., Elroy, Wis., writes: "Will strawberry-plants transplanted in August or September be likely to live?"

REPLY:—It would depend upon the condition of the weather during the month of September whether they lived or not. If cool and moist they would be likely to live, but if it should be dry until winter sets in they will not get well enough established to carry them through. It rarely ever pays in western Wisconsin, Minnesota and the Dakotas to plant strawberries in the fall. Except in very favorable conditions the plants are liable to suffer from winter-killing, and if they survive the winter they are so weak that they bring but little fruit the following season. Early in May is the best time to transplant strawberry-plants.

Setting Out Blackberries, Raspberries and Strawberries.—A. F., Bringham, Ind. If the soil is in good condition for moisture and thoroughly prepared the best time to set out blackberries and red raspberries is in the fall after the season's growth has ceased and the foliage has fallen; but a light covering of straw, coarse litter from the stable or even soil during the winter would prove very beneficial. Blackcap raspberries and strawberries for best results should be planted in the spring as early as the soil is in good condition for working. Plum-trees may be set in either spring or fall. I like best to secure them in the fall and heel in or bury during winter and set them out in early spring. The Ancient Briton is one of the best varieties of blackberries. In red raspberries the King, Loudon and Cuthbert are the best. For blackcaps the Palmers, Older and Gregg are the best market sorts, and equally good for home use. Corn-stalks make a good mulching for strawberries, but I have never tried using corn-cobs.

Rabbits and Borers.—H. P. V., Wintersville, Mo., has heard of a new way of keeping rabbits and borers from damaging fruit-trees. The receipt is to get pine-tar, and mix enough crude carbolic acid with it to make it spread nicely, and put it on the trunks of the trees. It is claimed for it that it will last three or four years on the trees, and that neither rabbits nor borers will molest them. I have not tested the remedy, and would not risk it on trees that I consider of any value. It might be applied to old trees, where the bark is thick and rough, without great danger of injuring them, but such trees are not in any great danger from rabbits. An annual washing of the base of the trunks early in June with a strong soap-suds containing one ounce of carbolic acid to each gallon would be equally as good a protection against borers, and otherwise beneficial to the trees. I most certainly would not risk using it on young, smooth-bark trees. Any substance that closes the pores of the bark and sticks so long is liable to injure, and in some cases kill, the trees. Fraziers' axle-grease has been recommended for the same purpose. Some have used it without apparent injury, and others have killed their trees by its use. Where there is danger of injury from rabbits the safest and best protection is wrapping the trunks with burlap cloth or manila paper or fastening lath or wire screens or thin wood veneer about them during the winter months; and I have found nothing better for preventing borers than thin soft soap or strong soap-suds applied about twice in June.

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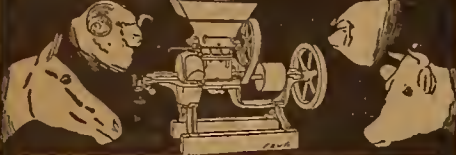
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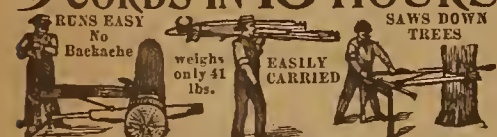


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THE POISON-IVY

IN THE September 1st issue of FARM AND FIRESIDE a correspondent who wishes to know how to get rid of poison-ivy (*Rhus toxicodendron*) without handling it or destroying a lawn is advised to employ one who is immune to root up and burn the plants, or to kill them by applying concentrated sulphuric acid in the spring of the year. While both of these methods are undoubtedly effective, there is another which is much simpler and less laborious than the uprooting method, and not so disfiguring to the lawn as either of those recommended.

It is generally known that much of the true sap of any deciduous plant which the leaves of the previous year perfected is stored up in the roots for use in early spring in the formation of new foliage, and when this has been accomplished the greater part of the sap is exhausted. Now, if in early spring, as soon as the young leaves have fairly expanded, and before they have commenced to perfect sap, the poison-ivy, or any other plant, is cut down close to, or just under, the ground it will be nearly, if not quite, killed. The poison-ivy is very tenacious of life, and the little supply of sap left in the roots will be employed in forcing up a weak crop of shoots; but if these are immediately cut off, and also any others which may follow later in the season, the chances are that the plant will be completely eradicated without further attention. But should a few weak stems appear the next spring, cut them off as soon as the leaves have expanded, and that will end it. This method never fails when it is commenced at the proper season and the second crop of shoots is carefully looked after; the work may be safely done by one who is not immune, provided a dry day is chosen and care exercised not to come into direct contact with the plant. If a breeze is blowing it would be safest to keep to the windward of the plant while cutting it.

The alcoholic solution of sugar of lead recommended for allaying the poison is a good remedy, but it is a fact that a remedy which will give relief to some persons will have little or no effect with others. An excellent lotion for the poison is made from ten cents' worth of sulphite (not sulphate) of soda dissolved in a pint of water. This may be bottled and kept always at hand. One of the best home-made remedies for ivy-poisoning is said to be a strong tea made by boiling or steeping sassafras-root. Make the solution strong, and bathe the affected parts freely. Another remedy which is said to be excellent is to fry spearmint in lard, and apply the salve four or five times a day. Water as hot as it can be borne affords relief. A very strong solution of salt and water is oftentimes effective, and lime-water is also good. Soft soap is a remedy effective in some cases, and is one available on most farms.

WALTER N. PIKE.

THE BLIND-BRIDLE

The blind-bridle was designed to prevent horses from seeing some things at which they would be frightened, and it well accomplished all that ought to be expected of it. Some horses when driven without blinders will see many objects by the roadside from which they will shy, but which they will not notice at all when driven with blinders. Any one can soon satisfy himself of this fact by fair trials. The blind-bridle does not prevent a horse from hearing, and it may become frightened by a noise; but it can see that the cause of the noise is at a safe distance. Generally the blind-bridle is of more advantage than disadvantage.

JOHN R. MACKINTOSH.

My observation and experience is that few users of horses give them credit for what they know. The users of horses as a general thing do not establish sufficient reliance and confidence on the part of the horse in the driver. There is no doubt that ninety-nine horses in every one hundred driven without blinders will quickly learn to watch the driver and the wagon, and all the motions of the driver; and in seventy-five out of a hundred cases the habit will become very disagreeable to the

driver. I am now using a very fine road-horse, very timid, very gentle, with no vices—a woman's horse—and he will turn his head so he can use both eyes to look at me; and if he could talk, he could not say plainer, "What are you doing?" I fail to see where the blinder in any way injures the horse. He can see ahead, to the left and to the right enough to cover ninety degrees—all that is necessary. Blinders compelling this range of sight and shutting off watching the wagon and driver make the user safer and driving more agreeable. Ninety per cent of them using horses will agree with me.

J. A. DREW.

In an article under the head of "Farm Animals" E. P. Powell very severely denounces the use of the whip and blinders. I believe that a merciful man is merciful to his beast, but cannot agree with Mr. Powell. I have owned horses, and have seen horses owned by others, that absolutely required whip and blinders—horses that were broken as well as they could be. I have a mare that never wore blinders in her life until the past year. I can tell you she never was safe before she wore them; she would run away without the least provocation. Now, with the detestable blinders, she is a good, quiet horse, giving no trouble. There is a vast difference in horses—some require things, others don't.

A. M. BENJAMIN.

MOWING-MACHINE WHEEL ROLLER

In FARM AND FIRESIDE of May 1, 1900, is an illustration of a field-roller. If any one wanting a better one will take sixteen mowing-machine wheels and make a solid iron instead of wooden faced one they will not regret the slight increased cost. I have been using such a roller for some years, and would not exchange it for any pattern I ever saw. Each wheel is independent. There is no slipping and injuring tender plants, as there is in a long section-roller. It might be thought the lugs on the face of the wheels would injure plants. I do not find it so. It turns very easily and has the weight to crush clods, the lugs assisting in that work.

I find in use two good horses pull it easily. There are no bolts or rivets to get loose or come out, no matter if left resting on the ground, no wooden parts to rot or give out. I use a one-and-three-eighths-inch steel shaft, and have a middle and a bearing at each end; the rod turns in this case, and the end bearings are easily kept oiled. I prefer all the wheels of the same kind, but different makes can be used if they are of the same diameter. I cut the hubs, using a cold-chisel, so that I have a space of two inches between the face of each wheel; or if the wheel-hub is not long enough, get gas-pipe washers cut to regulate the space. For the middle bearing I cut the hub short, or get a pair of wheels that have no projection. Space middle wheels three inches apart, using a two-by-four timber. For boxing I get one-and-one-half-inch gas-pipe cut five inches long, using a "U" bolt to fasten boxes to the frame, drilling suitable oil-holes. I have assisted in helping neighbors make such rollers. I find no trouble in getting the wheels. Just start out after them and you will find them.

ROBT. C. MORRIS.

CORRESPONDENCE

FROM WEST VIRGINIA.—Romney, the county-seat of Hampshire county, West Virginia, is a town of about one thousand population, and is located in the famous South Branch Valley, one of the richest valleys in the world. It is a terminus of a branch of the B. & O. railroad, and is the distributing-point for a large territory. The state institution for the deaf and dumb is located here, and brings a large amount of money into town every year. This would be an excellent location for a creamery and a first-class planing-mill. A canning-factory would do a good business, as this is one of the best fruit countries in the United States, and much fruit goes to waste every year for want of a cannery. There is a peach orchard three miles from here of over thirty thousand trees. There are numerous smaller orchards in the county. Fruit of all kinds grows to perfection here. As a stock country this cannot be surpassed. All kinds of stock do well here, and are shipped in large quantities to the great markets near us. Romney, W. Va. C. F. W.

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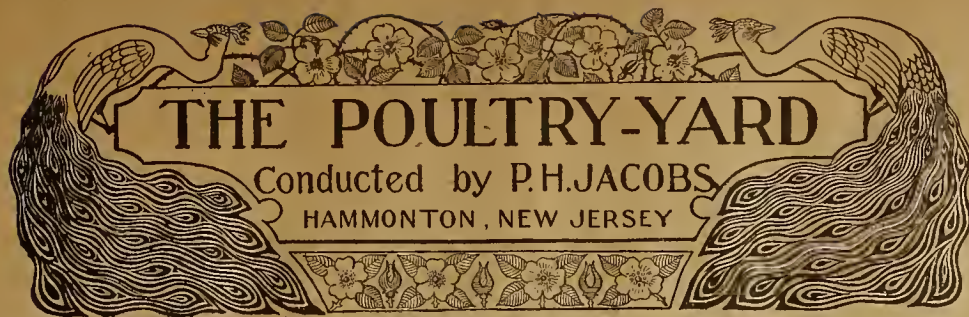
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GREEN FOOD AND BONES

It is often difficult to supply a sufficiency of green food to fowls when they are restricted and prevented from helping themselves. If the plan of changeable yards is adopted, only green food can be given them as they are frequently changed, or else feed it by cutting it for them. If the fowls are suddenly turned into a yard of growing vegetation they will not only do themselves damage by overfeeding, but they will also destroy quite a quantity. It is best, therefore, to grow the food, gather it while it is young and tender, and feed it in moderate quantity, first cutting it into short pieces. The yards, after the green food is nearly gone, may then be opened to the fowls, their late locations spaded up and seed sown upon the places they have occupied. This turns under the manure, enriches the soil and keeps the yards clean and fresh. Among the articles that may be grown for their use are oats, rye, sorghum, mustard, turnips, kale, radishes and grass. These crops may be gathered when young, the tops only being serviceable, and as the grower does not have to wait for them to mature he can keep quite a variety on hand. If preferred, grass may be cut with a lawn-mower when tender, cured and put away for winter use. Always sow rye in the fall for early spring use. Cabbage should be grown elsewhere for fowls, as also pop-corn, sunflower and sorghum seed, as such crops should mature. In winter cooked turnips, scalded cut clover and cabbage should be given. Green cut bone is also essential. The fondness of fowls for bugs and worms is not an unnatural one. The animal matter thus secured supplies a most important element in the fowl's food. It is largely because the fowls cannot procure this food in winter that they cease to lay eggs. Another reason for few eggs in winter is that the hens are not always in the best physical condition, as the food they get does not contain the proper elements for egg-making; hence, as a hen cannot make eggs without material with which to do so, food containing the necessary elements must be supplied if full egg-baskets are expected. It is for this reason that the feeding of green bone has become so popular among money-making poultry men and women. Green cut bone supplies this needed element as does no other food, and at a less expense than grain can be fed. It keeps the fowls healthy, makes eggs, and is, in short, an indispensable food. No person who keeps fowls can afford to be without a green-bone cutter. It is also more and more apparent every year that clover (or other grasses) is one of the most economical and best foods that can be given to poultry. In summer the hens can get the grass on the range, but it is the winter that compels the exclusive feeding of grain. It is not green food that the hens want at that season so much as bulky food—something to dilute the concentrated grain, to promote digestion and provide the hens with the necessary elements of egg production. Clover contains more lime, more sulphur, more nitrogen, more phosphates and more mineral matter in all forms than grain, and it is much cheaper. A hen cannot eat uncut clover without becoming crop-bound. One end of the clover must be fastened to the ground or she cannot pull it off. But when it is cut to half-inch lengths, scalded at night, sprinkled with a little ground grain, and salted to season it, the hen will have a luxury that she prefers to all others.

ADVANTAGES OF DUCKS

Ducks have many valuable qualities, such as early maturity, delicacy of flesh, prolificacy and large eggs. They have a bad reputation as enormous feeders by a great many farmers and

poultry-breeders, but this arises from the fact that they are fed irregularly. If allowed to forage on low ground, ditches, streams or ponds, and fed when other fowls are, at regular hours, they will not devour more than other poultry maturing as early. They destroy an immense number of insects, and it will pay to keep them for this purpose alone. One important point in the management of ducks or geese is to give them comfortable quarters. By giving them their principal meal in the barn-yard in the evening they will soon learn to know their home and return to it with great punctuality at the close of day. Their eggs are usually laid in the early morning, and if they are allowed to remain at large during the night the eggs will either be lost or destroyed. The most favorable place for building a duck-house is upon a tide-water stream, where they can have access to sea food; but where this is not practicable they can be raised successfully even when the accommodations for swimming are very limited or none at all. The period of incubation of ducks is about twenty-eight days, and the best incubator is a Plymouth Rock or Brahma hen, giving her from nine to twelve eggs, according to her ability to cover them. The food to be given to the ducklings is the same as for goslings; namely, cooked potatoes, ground meat, bran, milk, and green food that is convenient. Give an abundant supply of clean water. The Pekin ducks seem to take the lead of all others. They are in very large demand, which proves their real merit. The plumage of the Pekin duck is of a certain cream-white color, and they have yellow bills and orange legs. They are very ornamental, and are kept on this account in some of our public parks. Their weight is sometimes fifteen to eighteen pounds a pair when from ten to twelve weeks old. They are considered excellent laying ducks, are highly esteemed for their early maturity, hardiness, flesh and eggs, and will lay on an average from one hundred to one hundred and fifty eggs a year.

CHICKS IN BROODERS

The heat demanded in the brooder depends upon the weather. Very cold days, damp days and windy days all influence the chick. There is no temperature for the brooder, because the temperature is not the same at all points of the brooder, being greatest near the source of heat. About ninety-five degrees is correct for very young chicks, but the rule is to have the brooder so warm that the chicks will spread out and not crowd, even if it takes over one hundred degrees. They should be kept in the brooder until well feathered—about eight weeks—but even then it depends on the season. If the chicks are given plenty of warmth until ten weeks old they will grow faster and be larger. At no time should they be exposed, when feathered, to cold at the freezing-point. In winter, when chicks are being raised for market, they cannot be removed from artificial heat until ready for slaughter. A larger number of chicks can be raised under brooders than under hens, and it requires no more labor to attend to a large number than it does to lose half of the time running after a hen with four or five chicks. No lice affects them, and but few die of disease, as they receive better attention and are kept clean. They become accustomed in a few hours to any familiar sound, and can be called up by a few taps on a board or piece of tin. They are gentle and under control. They can be counted, their wants discovered, sick ones noticed, and particular sizes and breeds kept together. Having no hen with them, the "first impressions" with brooder-chicks are always the strongest. They prefer the light, and will not

go into a dark place. When chicks come out of the shells make a little pen of boards around the brooder about six or eight inches high, allowing not over eight inches of space around the brooder, as a yard. Feed and water them in this space. They will then become accustomed to the brooder in a few days. If the room is at ninety degrees the chicks will need no warmth under the brooder, yet they will prefer to feel something over them. It is better to have the room at seventy and the brooder at ninety degrees. Chicks soon learn, but the time to teach them is the first forty-eight hours.

IMPROVED FLOCKS

It is generally admitted that improved poultry pays as well in proportion as the improved breeds of hogs or sheep; that is, on general principles. Of course, the great mass of poultry is raised and sold by the farmers. The ear-loads of poultry and eggs shipped from all over the West come from the farmers, and since the introduction of the improved breeds the supply is rapidly increasing. No farmer can longer afford to raise the common chickens. If they cannot have full-bloods they should procure thoroughbred roosters, and they will be so well pleased with the cross that they will soon work into pure-breeds. Pure breeds mature quicker, grow larger, sell for more money, lay more eggs and require a little more care, but with warm, clean, comfortable quarters, a variety of food and by not feeding too much corn eggs may be had all through the winter.

GAPES

Scientists who have made a thorough and successful search into the causes of gapes in fowls have formulated the following conclusions: The cause of the disease is a small, vernacular parasite (two of which, the male and female, cling together) that infests the trachea, or windpipe, of the young fowls. The larvae of the parasites are usually introduced into the fowl by being drank in the water, though sometimes healthy chicks get them by eating the worms that are coughed up by those that have them. They may be prevented by putting a little salicylic acid in the water the chickens drink. It may be cured by mixing garlic or onions in their food or by mixing powdered asafetida and powdered gentian with it. A drop of tincture of camphor or spirits of turpentine on a bread-crumbs is also recommended.

IMPORTED EGGS

Thirty thousand dozen eggs were recently received by a single steamer in New York. They came from Germany, and many of them were limed by a superior German process. It does seem as if our farmers and village residents might raise hens enough to supply our own market with eggs. Improved methods of "hen management" for securing fertile eggs ought to enable our farmers to compete successfully with those of Europe.

INQUIRIES ANSWERED

Greasing Chicks.—A. E., Akron, Ohio, writes: "I used grease on some chicks, and nearly all died, the chicks having lice. Will grease kill chicks?"

REPLY:—Grease is fatal to chicks if used on them too freely. A few drops of lard on the heads, however, may do no harm.

Millet-seed.—M. F. G., Goldsboro, N. C., writes: "I have a lot of millet-seed. How can I feed it to the best advantage?"

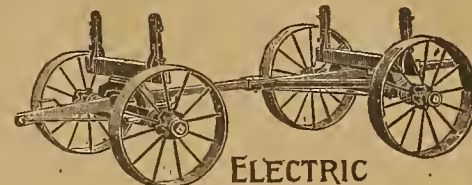
REPLY:—It may be given in small quantities between meals in litter or scattered to induce scratching, or it may be also given as a full meal—three times a week to adults and once a day to chicks—allowing a quart to a dozen fowls.

Plymouth Rocks and Wyandottes.—S. L. B., Wheaton, Ill., writes: "I have some White Plymouth Rocks, and my neighbor has White Wyandottes. We are novices, and as the two breeds are so near alike to us we wish to know the principal distinctive features of the breeds."

REPLY:—Both are white in plumage and have yellow legs, yet they differ some in form. The Plymouth Rocks, however, have single combs, while the Wyandottes have rose-combs, which curve back, following the base of the skull.

Farm Wagon Economy

The economy of this proposition is not all found in the very reasonable price of the wagon itself, but in the great amount of labor it will save, and its great durability. The Electric Wheel Co., who make this Electric Handy Wagon and the now famous Electric Wheels, have solved the problem of a successful and durable low down wagon at a reasonable price.



ELECTRIC

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CONVEX DISHORNER

and the Bucker Stock Holder. I also have a calf dishorner and all appliances for easy dishorning. We'ven't trade purchased from Chicago

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Illustrated hook free.

THE GRANGE

Conducted by MRS. MARY E. LEE, New,
Plymouth, Ohio

IF PEOPLE had the confidence that their zeal would indicate, that the officials they elect with so much gusto would faithfully perform their duties, then would they let the law take its course. If they placed the faith in the integrity of the judge on the bench that their pre-election efforts would indicate they possessed there would be fewer exclamations, concerning a criminal, if he ought to be mobbed by good and conservative citizens. It is true that the inherent love of law and order in the good citizen prevents him from carrying a threat of this kind into execution; but in the hands of lower grades of mentality the threat becomes a terrible reality.

The mob does not reason. It knows too well the means taken to elect dispensers of justice, and its knowledge is not always conducive to respect of the official. I would not make this an excuse for mob violence, but I would suggest that many, in their blind, partisan zeal, become accomplices of the most lawless element of society.

Let us try to keep our judgment clear during this campaign. Let us study the questions at issue carefully. Let us select papers that will present both sides of the issue ably and comprehensively. Let us not stop at this, but search history, and read in the light it sheds the ultimate fate of this or that policy. Let us always remember that true patriotism is distinct from partisanship, and that he serves his country and mankind best who carefully considers the issue, decides conscientiously, and votes according to the dictates of conscience. Then let the verdict at the polls be what it may, still keep faith that a divine principle rules the world. Remember that the party that is successful is composed of fallible men. Remember that the officials are not gifted with supernatural powers of insight into your mind, and that to secure a just government you must make known your wishes in an able and comprehensive manner. Governments derive their just powers from the consent of the governed. Be very sure that your "consent is fearless, frank and clear." Do not let it be inferred from your silence that you consent to injustice and oppression, but through the organization that represents your interests, by private letter to your representative, remonstrate against the evil and heartily indorse the good. If you will do this conscientiously and earnestly, then will you accept the first sentence of this article as your confession of faith.

Didn't I hear some of you say that you were going to write immediately to the Department of Agriculture for the new year-book? You also thought of inquiring of your senator or representative if he had any year-books of previous years at his disposal. Then you were going to write to Dr. Wm. T. Harris, Commissioner of Education, for his report and those pamphlets that the department is issuing. With these for a nucleus for a grange library you thought others might be induced to contribute volumes. You also built great air-castles of the exhibitions you were to have this winter, of socials and lawn parties of various kinds. With the proceeds you were going to purchase some delightful fiction, history, biography and travel that were to while away many hours for yourself and woe that young boy or man from the corner grocery and the wayside depot. You were going to so fill that young girl's mind with ambitious thoughts of the future as to undermine the influence that that worthless young man in duddish clothes has over her.

Another one was going to secure some of the Perry pictures and several of those fine engravings our publishers are offering for your grange hall. All know the influence a vivid picture has in molding character. You were going to have your hall filled with these choice works of art. Then you intended to otherwise decorate your hall and make it more cozy and homelike, the social center of your neighborhood.

You have seen pictures of the beautiful interiors of city club-houses, and you want yours not a whit behind it in coziness and beauty. To be sure, it will not be so expensive, but it is probable it would be far more enjoyable.

All these things, and many others, methinks, were your intentions. We all have heard of the place that is paved with good intentions. Let us be very careful not to pave more than our fair share. There are too many others who are seeking a monopoly.

We are all interested in better schools. We want our teachers to use progressive methods in teaching. But we do not have a very definite idea of just what those methods should be, or what constitutes an ideal school. Why not add a good live school journal to your reading-room or club? Or if several families would combine and take one or more school journals the neighborhood would then be enabled to keep in touch with the new educational thought. Believe me, there must be a definite idea of what is wanted before any real permanent good will result. To say that we want better schools, without a well-defined idea of what constitutes a better school, is a waste of words. First know what you want, and then find the means to gratify that desire. There are plenty of teachers who are anxious to do the work. Your own local teachers, spurred on by necessity, will soon accommodate themselves to the new conditions. Their work will be productive of better results for the children, and broader, fuller lives for the teacher. This demand for better service must come from the patrons. Employees seldom inaugurate reforms that will cause them extra labor. To be sure, there are teachers who earnestly endeavor to give the very best service possible, and their salary is not at all commensurate with their ability and services. But there are others. Let me earnestly urge this matter upon you. You will then see that this desire from higher educators to add more studies to the compulsory list arises not so much from a desire to overwork pupils as to compel teachers to better fit themselves for teaching the most ordinary branches. Let the patrons have an intelligent knowledge of the needs of the school, let them be ready to co-operate with the earnest, progressive teacher, and aid the poorly equipped teachers to better methods, then will there be better schools, better teachers and a more progressive, happy neighborhood.

2

THE PICNICS OF 1900

The picnic season just passed has been one of rare interest if numbers and close attention to the speakers are an indication of the people's feelings. National Master Jones and National Lecturer Bachelder have been heartily received by enthusiastic audiences. Grange enthusiasm has been aroused, new converts made, and the order strengthened in a way that gives rise to fond hopes for the future. The farmers are awake to their own interests. They realize that they, and they alone, must look after their own concerns. They have a better-defined idea of what the phrase "minding your own business" means. And they eagerly ask their leaders, who are marshaling a great host of organized farmers, how they may best direct their efforts to secure justice and equal opportunities for all, special privileges for none. They have observed the value of organized effort in other industries. They ask what the organized farmer is doing to better his condition and aid in the development of a purer national life. They have received an answer, and judging by the number of new recruits that answer was satisfactory.

One of the most encouraging signs lies not in the numbers uniting with us, but in the quality of the new members. It is getting to be a harder thing to get in a well-established grange than formerly. Local lodges are learning new lessons of power and usefulness. They demand that the new member shall be worthy of the honor conferred upon him in inviting him to unite with so strong and influential an organization

as the grange. The notion that each recruit must have the distinct idea of the privileges of membership is gaining ground. In many of the most progressive and intelligent neighborhoods membership in the grange is the "open sesame" to the most exclusive society.

The crowds attending these picnics were composed of the usual elements. The sleek politician looking for votes, the ardent friends of the grange and those prejudiced against it jostled together. He who was looking for a slur on his party stood "cheek by jowl" with that eager listener for a glowing tribute to his own party, the opposite of the first. Neither found what they sought, but became eager listeners to the eloquent speakers. Then there was that great majority of nondescripts who are interested in anything or nothing, the great army from which recruits to either side must come. And while the speakers poured forth their arguments and their pleas men became interested in spite of themselves. Here were men laboring not for the good of any political party, any fad or creed, but for the good of their fellow-man. They told him of the glorious possibilities of the American farmer, of his splendid opportunities, of the circumstances that would make him powerful or degraded according as he made use or abuse of his privileges. They preached the old idea of citizenship to him. He was not only to produce crops, but he must aim to produce the very best crops possible at a minimum of cost. He must be able to go into the market and sell these products at a fair profit. He is a social being; he must cultivate the social graces. He is an intellectual being; he must develop the intellectual faculties. He is a spiritual being; he must develop the spiritual qualities of his nature—those qualities that proclaim his kinship with the divine—that he may the better serve his fellow-man and gain a rarer happiness for himself. They preached the old, old doctrine, but ever new, that other leaders have been preaching, now are, and ever more will preach. But with this difference: They find thousands of eager listeners where before there were only hundreds. They find hundreds of converts where before there were only individuals. The same old story is told. The new thing is the multitude of listeners to that story.

What the result will be none can tell. Surely if we are to judge by the past it will be glorious. Let us not forget the lessons the summer brought us. Let us renew our zeal and courage in our frequent meetings. Let us learn to do the things near at hand, and not sigh for the glories afar. The deeds of to-day in our own circle may become as renowned in the future as the works of the past now are.

2

A GOOD LETTER

I recently received a good letter from Mrs. Florence Bailey, of Indiana. Shall I tell you why I call it good? She inquired how to organize a grange, etc.; and then she added, "We have a good neighborhood composed of well-educated, progressive farmers. Husband and I have often thought that we might have a good grange here. We have read so much about it in the FARM AND FIRESIDE, and in Mr. Derthicks' grange department in the 'Ohio Farmer.'" Why so good? Because there breathes from it a broad and liberal spirit. Mrs. Bailey does not claim that all of the intelligence and progressiveness is centered in her family. She recognizes in others the qualities she possesses. I wonder if many eminently good and earnest people might not glean a hint from this.

Then there was her complimentary reference to a co-worker. Very many of us have been glad to drink in grange gospel from Mr. Derthick's pen. Many have been won to the grange by his calm, judicious arguments, in which there was no hint of the many fads that afflict the public mind. It is a pleasure to know that others recognize these qualities and will allude to them in a letter to another. Before one can be successful in the highest degree he must accord to others their fair and honorable share in the world's work. Such a letter displaying such a spirit is altogether too rare.



There are so many points of merit about Lythite cold water paint we can't tell them to you in this small space. Write and get them.

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H. S. LEHR, PRESIDENT, ADA, OHIO.

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Before you buy a watch it will not cost you a cent to see our great watch bargain. Write us your name and address, and we will send you by express for examination a handsome **WATCH AND CHAIN** C.O.D. \$4.50. Express charges paid. Double hunting case beautifully engraved, stem wind and stem set watch, fitted with richly jeweled movement, fine-adjusted and guaranteed a correct time keeper, with long gold plated chain for ladies or vest chain for gents. If you consider it equal in appearance to any \$40.00 gold filled watch and chain warranted 20 years, pay the express agent \$4.50 only and the watch and chain are yours. Our 20 year guarantee sent with each watch. Mention if you wish Ladies or Gents size. **DIAMOND JEWELRY CO., 225 Dearborn St., CHICAGO, ILL.**

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Boys and Girls can get a Nickel Plated Watch, also a Chain and Charm for selling 1 1/2 doz. Packages of Blaine at 10 cents each. Send your full address by return mail and we will forward the Blaine, post-paid, and a large Premium List. No money required. **BLUINE CO. Box 392, Concord Junction, Mass.**

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This little farm is located in East Tennessee, on the Cumberland Plateau. It is a great bargain, and of peculiar value to any one who seeks a climate that cures all lung or throat troubles. Fences, buildings and fruit include pretty fair improvements. Address **CHAS. G. HALL, MILFORD, OHIO.**

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4 Buggy wheels with tire on, \$7.25. With Axles Welded and Set, 11.00. I make all sizes and grades with Steel or Rubber Tire. Send for catalogue giving prices on wheels 2 1/2 to 4 in. Tread with instructions for ordering. Rubber Tire Buggies, \$65. Buggy Tops, \$5.90. Special Grade Wheels for repair work, 5.50. Freight prepaid. If you write to-day. **W. F. BOOB, Centre Hall, Pa.**

This beautiful Turquoise or Lovers' Knot Bangle Ring, warranted three years, with initial engraved and a premium absolutely FREE. Send 10 cents to help pay postage. Catalogue free. The Shell Novelty Co. Dept. U 194 Broadway, N. Y.

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For handling and storing Onions, Potatoes, Corn, etc. **7 CENTS EACH** In bundles, ready to haul together. Send for illustrated description. **Grant Cooperage Co., Austburg, Ohio.**

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or country property no matter where located. Send description and selling price, and learn my successful plan. **W. M. Ostrander, 1215 Filbert St., Phila., Pa.**

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With six knives will cut all kinds of vegetables nicely and very rapidly. Sent post-paid for \$1. **JOHN LUSHEL, Box 155, Mishawaka, Ind.**

OPIUM and Liquor Habit cured in 10 to 20 days. No pay till cured. Write **DR. J. L. STEPHENS CO., Dept. A5, Lebanon, Ohio.**

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EXPERIENCE DESIRABLE But not absolutely necessary. Agents, write me for particulars of positively the best paying agency of the season. **E. HANNAFORD, Springfield, Ohio.**

WHEN SCHOOL BEGINS

By Bertha Knowlton



WHEN the young people pack their books, not to say trunks, and are off for school older heads begin to plan some course of study or reading that will be profitable and recreative. The fall and winter months are the time for such effort. Spring and summer are too full of outdoor allurements for young and old to be conducive to study. It is coming to be more and more the fashion for busy people whose school-days are long past to keep more or less in touch with the young folks by keeping up some line of study.

Much of this work is done in clubs, but a woman living out of town and making every sacrifice of time, comfort and money, to give her boys and girls an education, will not be able to join a club. After all, it is the social side of the club which appeals to us most. Study worth calling by the name is usually individual, so the woman thrown largely upon her own resources, spending much time alone, may be the better thinker for it.

What the coming season means to any of us for general culture depends not half so much upon the time at our disposal as upon careful thinking out as to what it is wise to attempt along that line and what it is wise to leave alone. Ten chances to one it will be the woman with most demands upon her time who next spring will have the satisfaction of knowing she has learned something worth while in her reading. We all know how necessity to work develops aptitude for work, and she whose days and hours and hands and heart are full will very often find a few minutes for solid reading.

Last winter a number of busy women each bought a book, read it herself and then put it in circulation among the rest. As there were some thirty members, and only newer books were in the list, each member had quite a range of choice. This very informal organization had no meetings, no officers, no fees, and yet it put into the hands of each woman high-priced books hard to get from libraries at that time, because everybody was reading and discussing them. Among the books were such as "Wild Animals I Have Known," "Richard Carvel," Kipling's latest, and others not to be had for love or money at the public libraries, even where a library was available. Had this club chosen to name itself, it might have been called "The Up To Date," as its object was to see and judge the better popular books, even though few cared to read through the whole list.

To one who has no connection with any such club nothing is more helpful than to decide upon some general subject, and choose for reading at odd moments such books and magazine articles as bear upon the chosen subject.

One winter a lady chose our early American history as her theme, for the sole reason that it had always been to her a very uninteresting subject. She was broad enough to believe that the trouble was with herself and not with the history. In a few weeks she had become so interested that her reading was a pleasure and not a task. Her experience speaks for itself in her own words:

"I feel that a new world is opened for me and that there is no end to the delightful discoveries before me. I had no idea how many interesting things are continually coming up about early American history. Yet I have given only a few minutes each day, and that not at any set time. I find the secret of getting profitable reading done each day is to get enough knowledge of one's subject to be very much interested."

The good of much that we read comes to us later. We do not need to wash dishes, sew on buttons, sweep and churn and bake without a thought beyond these things. I have little sympathy for the woman (found chiefly in print) who carries on an instructive

course of reading in the interims of her morning work. There are too many things that take sharp watching and prompt acting. I for one should burn my cakes, let my "sponge" run over, starve my chickens, and do no end of mischief with such a combination of work and reading. Nevertheless, many a thought may fill the mind and leave the eye keen and the hand ready for whatever must be done.

Watch a woman while she peels a panful of potatoes or does her dish-washing and you will know whether her mind is engrossed with the petty, mechanical work in hand or is taking a legitimate excursion into realms of pleasant thought. Many worries will sink into insignificance if we can but succeed in keeping big enough thought foremost, and we can do so only by persistent practice.

If all of our reading is haphazard we will in this day of good periodicals and cheap books get much that is valuable; but if we will take a half hour or so to map out a definite plan for a part of our reading how much more will we gather that will stay by us.

Nor is reading all. If we have an interest in any subject (call it a hobby if you like) we will find many kindred souls, and the temptation to indulge in small talk and petty gossip will disappear. It is possible to build something of worth into our characters every day; but if the building is to be of any account there must be a plan in the work. Most of us build humbly, but we may all build well.

2

A FEW VEGETABLE SUGGESTIONS

TURNIP-CUPS.—Take turnips of about the same size, peel them, and scoop out the inside so as to form a little cup. Set them in a stew-pan, cover with cold water and add a little salt to season. Bring to a boil, then move to the back of the stove, and simmer till tender. Remove them carefully from the stew-pan, drain them, and then fill up the cup with chopped celery or mashed potato if you wish to use them as a garnish, or with chopped meat heated and seasoned if you use them as an adjunct for a "left-over" dinner.

That person who can invent ways to serve up the overworked Irish potato appears as a benefactor to the ordinary housewife. Hearing a lady spoken of as "the best cook in town," I ventured to ask what gave her so honorable a title, and was told, with an air of conviction, that "she knew twenty-three ways to cook potatoes."

The two following receipts vary the menu somewhat, the first one proving a good luncheon dish and quite hearty enough for hot weather:

POTATO OMELET.—Mix cold boiled potatoes cut in bits with one half cupful of soup-stock, and let them absorb it. Put them in a frying-pan with a piece of butter the size of an egg. When they begin to brown stir in two tablespoonfuls of grated cheese, and then let the mixture brown on one side, like an omelet. Serve on a flat dish, browned side up.

POTATO-PUFFS.—Mash smooth half a dozen boiled potatoes, and add the yolks of two eggs. When somewhat cooled stir in the two whites well beaten, two tablespoonfuls of cream, a little salt and nutmeg, and put into a baking-dish. Brown in a brisk oven.

CUCUMBER SAUCE FOR FISH.—Peel a large cucumber, cut it into bits, and put in a stew-pan with a pinch of salt; cover with cold water. Bring to a boil, then strain through a sieve and put again in a pan with a tablespoonful of butter and the juice of half a lemon. Cook for a few moments, then add a teaspoonful of chopped parsley, and serve hot. This is a grateful, delicate sauce for some of the weak-flavored fish.

Since we are assured that carrots

raw, chopped, scraped or sliced, or even cooked if needs must, are good for the complexion these neglected vegetables are no longer relegated to the cows, but have come forward into new favor. The following receipt makes them very palatable:

HOLLAND CARROTS.—Peel and scrape some fresh carrots and cut them into bits about an inch long. Boil them in water with a pinch of salt until quite tender, then pour off the water. Into the stew-pan with the carrots put one tablespoonful of butter, and gently fry for about fifteen minutes. Now add one half cupful of soup-stock, or even meat gravy, and one ripe tomato cut into pieces, or one half cupful of canned tomatoes. Simmer for about ten minutes, season to taste, and serve on bits of hot buttered toast.

CARROTS WITH RICE (American style).—Take about one and one half pounds of young carrots; wash, scrape, and put on to boil in cold water, with a pinch of salt. When tender drain off the water and add a tablespoonful of butter, a dash of pepper, the least bit of thyme and a little chopped parsley. Cook a little longer, say ten minutes, and then mash till quite smooth. If you happen to have it, stir in one half cupful of cold boiled ham chopped, or even bits of cold bacon, and serve hot around plain boiled rice. This is a nice dish for summer.

CARROTS A LA COLBERT.—To suit all tastes we give a French way of treating them. Scrape, and boil in salted water a few young carrots. When tender drain off the water, add two tablespoonfuls of butter, a pinch of salt and a little pepper and salt. Let them cook till tender, and just before serving stir in one half cupful of cream.

Spinach as ordinarily cooked is not an appetizing or nutritious dish. It may be made both, and can be so attractively served that it can ornament the daintiest table. Take half a peck of spinach; pick off carefully all wilted and imperfect leaves and wash it in several waters. Water enough will adhere to the leaves to boil it with, but stir it so that it will not burn. Let it cook about ten minutes, then add a little salt, and cook five minutes more. Then turn it into a sieve and let it drain. While this is doing take two tablespoonfuls of butter and one tablespoonful of flour and let them cook a few minutes in a saucepan; then add one half teaspoonful of salt, a little pepper and the spinach. Let these cook about five minutes, and then stir in slowly one half cupful of milk or cream. This should now be a pretty green paste, and may be served in a vegetable-dish or heaped up in a mound garnished with slices of hard-boiled egg. The prettiest way of all, however, is to cut bread into little boxes, removing the crust and scooping out the inside, and putting lightly into each a spoonful of spinach. Anyway, spinach is too thin a vegetable not to need enriching by the addition of butter, cream or soup-stock. Boiled in a cupful of the latter is an easy way to do it.

NANNIE MOORE.

2

LATE PICKLES

At the last of the season there will be small melons that failed to ripen, also tomatoes and watermelons, to be had cheap, and clingstone peaches. All of these can be utilized for the winter in many toothsome ways.

Take small cantaloups, peel them, cut in half and remove the seeds; lay them in weak salt-water for three hours, then cook them in sweetened vinegar until clear and tender, and stuff them with shredded cabbage seasoned with celery-seed, black and white mustard-seed and a very little salt and pepper. Tie the halves together with a cord, then make a liquid syrup of the proportion of one pound of coffee A sugar to three pints of vinegar, a few whole cloves and a very little stick-cinnamon; cook this until it is syrupy, then pour over the stuffed melons. They should be kept in a tall stone jar. Pour this syrup off for five mornings, reheat it, and pour back. Tie them up with cloth, cover with newspapers afterward, and keep in a cool, dry place.

A delightful pickle of green tomatoes can be made as follows: Slice on a slaw-cutter a peck of green tomatoes and a dozen large onions; place in separate ves-

sels and sprinkle the tomatoes with salt; pour scalding water on the onions and let them set until wanted. After standing two hours squeeze them out and arrange in a jar in alternate layers, sprinkling between them black and white mustard-seed, in the proportion of an ounce to each gallon, and a fourth of an ounce of celery-seed; pour over all a quart of vinegar and a pound of sugar brought to a boil, using the same proportion if more liquid is used.

For clingstone peaches, peel them, and throw into water to prevent turning dark. Make a rich syrup of two pounds of sugar to a quart of vinegar, and cook them in this until they are tender; then remove with a fork, stick three whole cloves in each peach, place them in a high stone jar, and pour the hot syrup over them, also a teacupful of good brandy; tie up closely. They need not be sealed.

B. K.

2

CARE OF THE HANDS

Because a woman does housework is no reason why she should have rough, red hands with carelessly kept nails. If not for their looks, then for comfort the hands should have some care.

Dish-washing will not hurt the hands if they are not put into too hot water, and are washed and rinsed well afterward and thoroughly dried. The woman who does not have to work, and has plenty of time to take care of her hands, soaks them in warm water every day before she trims her nails and polishes them. After washing dishes the hands are well soaked, and it is a good time to give a few minutes to trimming and cleaning the nails and pushing back the cuticle, to show the pretty white crescents and prevent hang-nails. Never use a hard instrument for cleaning the nails, as it roughens them and makes them much harder to keep clean. Orange-wood sticks may be bought for this purpose. They are about six inches long, as large around as the small end of a pipe-stem and wedge-shaped at one end. They cost ten cents a dozen, and a dozen would last many years. Any little smooth stick of this size and shape will do as well. Put a very little absorbent cotton over the wedge-shaped end of the stick, and while the hands are damp clean the nails, moistening the cotton a little. Use this stick with the cotton to press back the cuticle, also, while the hands are damp. In a little while you will notice an improvement in the appearance of the nails.

Besides these sticks and cotton, one needs a pair of curved nail-scissors, a nail-brush and a fine nail-file. If the nails are brittle, rub a little oil or vaseline into them at night. After cutting the nails rub the edges smooth with the file.

If you wish to polish the nails a polisher may be bought, or a piece of chamois-skin will answer the purpose. There is a powder which comes for polishing, but only a little should be used, putting a little cold-cream or vaseline on the nail first and not rubbing hard enough to heat the nail. After this the hands should be washed, to remove all the powder.

If the hands are stained, tomato or lemon juice will usually remove it.

There is a fluid kept at drug-stores which is excellent for removing ink and other stains from the hands or nails or from linens.

When paring fruit, if strips of cotton are wrapped about the forefinger and the thumb it will prevent staining, and cutting, also.

Children should be taught while young to use the orange-stick and keep their hands tidy. The habit of caring for the hands and of brushing the teeth cannot be formed too young, for the effects will add much to the personal appearance of both child and adult.

MAIDA McL.

2

INCREASING ITS CIRCULATION

A journal published in Madrid has selected a novel way of endeavoring to increase its circulation. It prints its news not on paper, but on linen cloth. In place of ink a composition is used which readily dissolves in a liberal water-bath, so after absorbing the news the reader may place the sheet under one of the many public fountains, and, presto! he has a snowy handkerchief.

"THE LIVING DEAD"

What shall we do with our dead—
The dead who have not died,
Who meet us still in the very paths
Where they once walked by our side?
Not those that we love and mourn,
At rest on a distant shore,
But the lost yet living women and men
Whom we loved—and love no more.

There are shroud and flower and stone
To hide the dead from our sight,
But these are ghosts that will not be laid—
They come 'twixt us and the light;
And the heaven loses its blue,
And the rose has worms at the core,
Because of the living women and men
Whom we loved—and love no more.

—Edith Bigelow, in *The Critic*.

MAKING THE MOST OF A CENT

AN ARTIST is a genius who can see more in commonplace objects than less gifted mortals, and by the magic of his technique and color can make others see it also."

"The difficulty lies in the last," the speaker added. Suddenly she picked up something from the rug, and holding out her hand toward the group of happy-faced girls, exclaimed, enthusiastically, "What do you see there?" "Only a cent," "The hundredth part of a dollar," "Half a postage-stamp," were the replies.

Turning to the president of the club, Edith asked, "Did you ever notice anything on a cent except the head, date, inscription, wreath and shield? I could show you twenty-five different things on that insignificant little cent."

"Do it; do it," they echoed. She did. Result, much applause. The proposition to invite a few men was duly approved.

The clever invitations were round, of water-color paper painted copper-color, a facsimile of the face of a cent. The reverse side, which had a white background adorned with gay, rose-tinted cherry-blossoms, carried the invitations.

MY DEAR MR. BLANK:—

The Selden Club will be glad to see you on Thursday evening. Sincerely,

ELEANOR OSBORNE, Secretary.

Cent Collections.

Japanese cherry-blossoms, which are a beautiful rose-color, formed the graceful decorations. In the drawing-room a frieze of slender branches of these dainty flowers was skilfully arranged. Gay Japanese lanterns were effectively used.

A small card gaily decorated with cherry-blossoms, a pencil and a cent were given to each guest, and silence reigned. The cards had this inscription:

Find the following on your cent: On one side, 1, a fruit; 2, a flower; 3, a small animal; 4, a place of worship; 5, a part of a hill; 6, union of youth and old age; 7, a part of a vegetable; 8, a division of land; 9, an egotist; 10, a characteristic of —.

On the opposite side of the card appears these: 1, an emblem of victory; 2, a messenger; 3, a beverage; 4, what all girls want; 5, a name of the ocean; 6, a connection; 7, an article of defense; 8, weapons; 9, things we all like to receive; 10, a measure of coal.

From the hostess' little book we learn the answers:

1, date; 2, tulips; 3, hare; 4, temple; 5, brow; 6, United States; 7, head; 8, neck; 9, I (eye); 10, add here the name of some rival town; cheek is the answer.

Reverse: 1, laurel-wreath; 2, sent; 3, tea; 4, beau; 5, sea; 6, rod (on the shield); 7, shield; 8, spears; 9, letters; 10, ton.

Thirty minutes was the time limit which could be devoted to each side of the cent.

The prize was a cabinet portrait of President McKinley, in a handsome gilt frame of laurel-wreath design.

The ingenious author of this list won the special prize given to the guest discovering the most additional points of interest on the little coin.

1, a cross; 2, a trap; 3, a mark; 4, to study; 5, a sheepfold; 6, a cottage; 7, a branch of the human body; 8, part of a tree; 9, a sea mile; 10, a character in music.

Answers: 1, ten (X); 2, net; 3, note; 4, con; 5, cote; 6, cot; 7, toe; 8, leaves; 9, not (knot); 10, tone.

All these can be made out of the letters contained in the words "one cent," with the exception of number eight; the leaves are in the laurel-wreath.

A glorious American flag rewarded the player's ability.

The program of music was as follows:

Song—"Where the Sweet Magnolias Bloom."
Vocal Solo—"Summer".....Chaminade
Mandolin Solo—"Reverie".....Fancier
Vocal Solo—"The Mission of a Rose".....Cowan
Vocal Solo—
a "May Morning".....Denza
b "Spring Song".....MacKenzie
Mandolin Solo—
a "Serenade".....Spies
b "La Danseuse".....Hoffman
Banjo Duet—
a "Sounds from the Cotton-field."
b "March of the Minute-men."

One of the delightful original ideas of the evening consisted in taking up a collection of one cent from each guest after each number on the program.

The menu for this novel entertainment included cherry salad, tongue sandwiches, egg sandwiches, olives, salted peanuts, cherryade, orange-ice, and small fancy cakes artistically decorated with rose-colored frosting.

Each item of the supper cost the guests one cent, the only exception being the ices; it required five cents to buy one of these.

The proceeds were devoted to purchasing fruit and magazines for "Antonio," the plucky little Italian newsboy protege of the Selden Club, who has been in the surgical ward of St. Joseph's Hospital for six months.

ADELE K. JOHNSON.

TEACH CHILDREN TO READ

"It was because you taught me right, and that I was impressed in the days of my girlhood with the knowledge, that good books were safe and good companions and valuable ones," I said the other day, as I laid down the letter from mother.

The letter had just come in reply to the birthday letter I had written the mother, who has grown old, and in acknowledgment of the birthday gift, an elegantly bound volume of Lucile.

In the first place, the mother's birthday is never forgotten. She knows that the returns of the memorable day will always bring letters from her children, and gifts, also; and as she herself has always been a "book-worm" from her earliest days her gifts are very apt to be good books of standard value and general popularity.

I read the letter over and over with a sense of happiness glowing through brain and nerve-centers, and then fell naturally into reveries. A number of years have intervened between those days of childhood, girlhood and maidenhood and the present time, and memory wings itself into the past with lightning-like rapidity, calling back the scenes and happenings of home days, when "we were all, all there!"

It is as yesterday that I see the bright fire glowing and the large lamp lighting up the family sitting-room, where gathered about the table at eventide were the father and mother, two daughters and the only son, all reading, and the reading interspersed with chats on the themes of the day and relating to the books and papers at hand. We bless those parents (one with us still, but the other gone) that they taught their children the value of books and general literature, and instilled into their minds and hearts from infancy a taste for reading. I say from infancy. And it is literally true. Before we were old enough to read stories and items of interest to child-minds were read to us and talked over with us. Those words and instances that were not fully understood as read were explained until all were made clear and plain. Before we could read we learned to know from appearances and through daily familiarity the different papers and magazines that came to the reading-table. And they were always hailed with delight. Certain of the evening hours were devoted to the children's reading. Then early to bed, and not so very early to rise, for our parents believed in plenty of sleep for tired, growing children. The remainder of the evening was given over to self-entertainment by parents, or for en-

tertaining each other by the reading aloud of books or papers.

In those earlier days of our lives moneyed means were sometimes somewhat limited. The real luxuries were not plentiful, but all the comforts of life were always present. No matter how "hard the times," there were always dollars for expending for papers and books. The children were never forgotten when subscribing for the year's supply of reading matter, and as they grew older and older, and were able to read for themselves, more papers and periodicals were added, until the reading-table was literally loaded year in and year out.

This love for reading grew a part of the very life of each child. In their own homes are found the dailies and weeklies, the monthly magazines and periodicals of all descriptions. Agricultural journals and weeklies are also numbered among the others. Every moment that can be given to reading is made the best of, and counted among the chief pleasures of the day.

What matters it now that simple gowns and suits were worn to school, and that "some of the other girls" were better dressed than ourselves? Minds and bodies were well fed with nourishing foods, and thus were we prepared to meet the future, well equipped for the realities of life. Many of the "other girls" we look upon from afar off to-day, knowing and seeing that the money expended foolishly upon them when young would have been well spent and to-day productive of much good had it gone to purchase plainer clothing, and had their minds been diverted from, instead of toward, parties, beaux, midnight suppers and the dance-room.

Perhaps occasionally during those younger days of which I speak we at times resented some of the differences that existed between our own lives and those of others. Perhaps, too, occasionally there was a wide diversity of opinion between parents and children as to what was best and proper. But for many years it has looked plain, and has been looked back upon with satisfaction and thanksgiving. While we were taught to read, and to read judiciously and understandingly, and of the best obtainable literature, many a boy and girl was growing up in ignorance. The mind was slowly starved to a point where good impressions are not readily made, and where the taste for reading is past establishing.

"I pity the woman who cannot sit quietly down at home and enjoy her home and her books and papers. Thousands of them are restless and ill at ease if they have an hour to themselves. They must see some one, go somewhere, attend entertainments, or feel lost. Within themselves they find no thought for reflection.

If only mothers everywhere could be thoroughly impressed with the desirability and the real necessity of teaching their children to read and to love books as companions, taking them to their hearts, instead of other people into their confidences. The companionship of fathers and mothers and good reading matter is always safe, and the influence is all for good, provided, of course, that the right kind of literature is always provided, and the objectionable and pernicious kept entirely from their knowledge.

The mother commends in her own children the characteristics there implanted by herself. She loves the remembrances and the books, and she feels a certain pride in knowing that her children are rather to be proud of than ashamed of. She knows them to be men and women of and in the world, and not mere parasites upon the face of the universe. She read to them from the days of their earliest understanding. She taught them to love the very appearance of papers and books. She talked to them of the world—its inhabitants, its mysteries and its possible attainments, where footsteps were started right; and she talked to them of worthy men and women whom it would be well for them to study and imitate. Of history she wove stories, so entertaining that when grown older they were anxious to read for themselves.

The world, they say, is full to overflowing with literature of unending variety. And yet could but just one

more mother be made to look upon this question just right, where but one mother does to-day, more print-shops would need to be started, more papers and magazines would be needed and be read, and great would be the advancement everywhere. ELLA HOUGHTON.

LIGHT HOUSEKEEPING

"I enjoy cooking, but I hate to cook for just two," says Mrs. Youngwife. Few people realize the difficulties which surround the young housekeeper when transplanted from a hungry, growing family to her new home of "just two." My subject has no reference to chafing-dish menus, or one-servant housekeeping, but rather has special bearing toward small economics, which I hope will interest the young cook. I pity the housekeeper who does not wish to practise economy—who has not learned before marriage to count the cost or calculate every expense. Thereon hangs a homily.

The beginner from the country will find it next to impossible to cook well without plenty of milk, and as the milk of a good cow is a source of revenue in suburb or country town, I furnish the bride with a cow and use cream in most of my suggestions, which are gathered from my own experience.

A quart of cream is too little to put into a churn, but butter can be made of such surplus by putting the cream into a half-gallon self-sealing fruit-can. Screw the lid on tight and give the can the same motion as a revolving-churn, after first placing the can on a folded towel in the bucket or pan partly filled with ice-water if the weather is hot. Churn by holding on to the lid and rocking the can on the towel.

Potato soup is easily made by putting two tablespoonfuls of sweet cream, a small lump of butter, a handful of broken crackers, and salt and pepper to taste, into each bowl, and filling with the boiling water in which the potatoes have just been cooked.

A handful of asparagus cut fine, cooked half an hour, seasoned, and thickened with a spoonful of butter and flour rubbed smooth, with a little cream added, makes a delicious soup for two.

If a loaf or more of bread is likely to get stale, slice thin and toast a delicate brown when the fire is suitable, and tie up in paper sacks; when needed for breakfast or tea, heat a pint of rich milk, dip each slice of toasted bread for an instant in boiling water, butter well, place in a deep platter, and pour over the hot milk.

Cottage cheese, which many are fond of, is easily made by heating the curdled milk and draining off the whey, or dipping out the curd into a bowl. No need of cloth strainers or even a sieve, though the latter is easily cleaned.

Breakfast hash for two is good made with a slice of bread, a cold potato or two, remnants of cold beef, ham or chicken chopped fine, seasoned to taste and heated in a buttered saucepan, and moistened with a spoonful of milk while cooking. Serve with hard-boiled eggs if desired.

Gems are much more easily made than biscuit or griddle-cakes. Sift one pint of flour, one half teaspoonful of salt and one teaspoonful of soda into a crock. Pour in rich buttermilk, enough for a batter rather stiffer than for griddle-cakes, and beat briskly for half a minute. This quantity will fill a tin gem-pan of eight cups; butter well, and bake in a hot oven. If an iron gem-pan is used the pan must be heated very hot before the batter is put in. If the oven is in use, gems can be baked on top of the stove in a well-buttered iron gem-pan, using a fork in turning. A hot gem split and served with canned strawberries or other fruit and cream makes a delicious dessert.

Utilize the empty tin cans in which fruit comes from the grocery, by melting the tops on hot coals till you can strike them off. These make good cooking-dishes for fruit or vegetables in small quantities, and can be used for puddings, oatmeal, etc., in place of an expensive double boiler.

The syrup-pails which accumulate are excellent for canning tomatoes or fruit and for storing lard.

VESTA C. TURNER.

[HOUSEHOLD CONCLUDED ON PAGE 17]

THE QUALITY OF HER MERCY

By Grace S. Richmond

STUART ARCHER was preparing for his departure from the Andersons' country place much less happily than he had made ready to come to it. He had needed the vacation, for he had worked steadily and conscientiously at his editorial desk for an interminable length of time, with no rest whatever. He had anticipated this holiday with keen pleasure. To spend a week under the same roof with Ruth Everett—he had not cared at all of what people the rest of the winter house-party might he made up—had appeared the very height of bliss. So it proved—up to last night.

Well, it was the old story. Archer had come to his room afterward feeling bruised and sore and miserable. But he could not reasonably blame her. He told himself that she had not shown him a particle more favor than she had any of the other men, and she had been very gentle and kind in her refusal. He had been altogether mistaken, of course, in fancying that he had at last succeeded in making her care. Yet it had been none the less a blow to him—a severe one.

All the men, and most of the girls of the party, with their chaperon, had left on the early train, going south to the city. Archer's route lay north, on a matter of business; his train would be due in an hour. There was some stir in the big square hall below as he came slowly down the stairs, wishing his leave-taking over. A number of people were gathered about Miss Everett, who held a telegram in her hand and was looking a little pale and frightened.

"I must go somehow," she was saying. "I simply can't wait all day for the night train. It's only twenty-two or twenty-three miles across the hills to Brentwood. I don't believe it's going to be much of a storm—and I'm not in the least afraid."

Archer, standing still upon the landing, gathered that Miss Everett's mother had been hurt in an accident, that she could not now reach home by train before nine in the evening, and that she was determined to drive. Mr. Anderson was trying to dissuade her, on account of his own inability to take her and because of the likelihood of badly drifted roads. The girl was begging to be allowed to start alone, and Archer instantly made up his mind that there was no other course for him than to offer to drive her to Brentwood. He did not stop to reflect what this might mean of prolonged misery to himself, under the peculiar circumstances; he came quickly down and gravely tendered his services to Miss Everett. These she accepted without a moment's hesitation, seeming to have forgotten everything but her anxiety and the means for relieving it. She hurried away at once to make ready for the drive.

"My dear fellow," said his host, warmly, "I'm sorry there's no one else to go, for I know your time is precious now your holiday is at an end. It's the worst of bad luck that Peters, the only man on the place I'd trust the little girl with, should be laid up with rheumatism, like my unfortunate old self. I shall not feel comfortable about either of you on this trip. It's a lonely road, always drifted after such winds as we've had lately, and this storm is liable to be a heavy one if I'm any weather prophet. Still I'll fit you out with a good span and plenty of wraps, and you must take a shovel to dig yourselves out of snowbanks. I suppose to a vigorous man like you such a drive seems rather desirable than otherwise, but I own it chills my blood to think of it—in such weather."

It chilled Archer's, also, though for a different reason. He made his preparations with a queer sense of getting ready for some sort of a desperate struggle, though he reasoned that his own heart would probably give him the most of the trouble he was likely to experience. He took a grim sort of satisfaction in thinking that at least he could do this much for Ruth Everett before he went out of her life forever.

It was eleven o'clock before they drove away from the door, waving a cheerful goodbye to the people at the windows. The sleigh was heaped luxuriously full of furs, smoking hot soapstones were at their feet, the horses before them were a magnificent pair, and both Miss Everett and Archer were dressed for encountering extreme cold. The girl in her sealskin coat, with a deep red tam-o'-shanter upon her hair and a heavy silken scarf of the same hue wound about her head and shoulders, her cheeks regaining their naturally bright color in the cold wind which swept into her face, looked fit to endure any sort of bad weather.

For the first few miles the two were almost absolutely silent. Once only Miss Everett spoke, to say, with evident sincerity, "Mr. Archer, you will understand that I'm too worried to talk. But I do want you to know how very kind I think this is of you." And Archer, longing to respond that he would take her to the world's end if necessary, an-

swered simply that he was very glad indeed that he could be of any help to her. After which perfunctory exchange of courtesies Mr. Anderson's horses traveled another three miles without hearing the sound of a voice behind them.

At the end of the tenth mile they came to a fork in the road. Approaching this Archer turned to his companion. "I suppose you know which way we should take," he remarked.

Miss Everett roused herself and looked about her—for the first time, Archer judged, since the start. "Which way?" she repeated. She studied the landscape for a moment, then announced her decision. "That way," she declared, positively, indicating the left-hand road. "The other goes to Sussex. There are more forks after two or three miles, then we take the right-hand turn."

Archer drove on, more slowly now, for the road lay up hill, and the horses were showing the first signs of a willingness to walk. The snow lay heavy and untracked, and in the gradually thickening storm it was growing every instant deeper. He looked at his watch; it was a little after twelve o'clock. He glanced at Miss Everett for the first time since they had started. Her fine, spirited profile, the eyes down bent, stood out exquisitely against the deep red of her wrappings. One or two dark little curls, which she wore on either side of her face, blew across her forehead in the wind. She seemed so absorbed he found himself daring to turn his head toward her just enough to bring the profile continuously within the range of his vision, telling himself that since the ache at his heart was intolerable, anyway, he could not intensify it by looking at what was not, and never could be, his. The fallacy of this argument was soon proved, for as he studied the beautiful outlines, which had long been to him the fairest in the world, he found the pain within his own breast tearing him with a force which he realized he could not long endure and be silent.

After a time she turned unexpectedly toward him, as if she had suddenly detected his gaze, and he half stammered the question he had vaguely formulated for such an emergency. "Are—are you keeping warm?" he asked.

"Perfectly." She drew her silk scarf more closely about her face, and Archer felt uncomfortably that he had been caught in an act under the circumstances she would be justified in resenting. He kept his eyes upon the road at his right now; and his former absorbing occupation gone, he began to realize that if she were warm it was more than he could say for himself. In spite of Mr. Anderson's heavy fur-lined gloves his hands were growing cold, and occasional chills chased one another up and down his back. He was not much used to winter driving, or had not been since he became a slave to his editorial desk. He pulled his host's sealskin cap further down over his ears. The wind was increasing; as they rounded a turn in the road it drove the snow against his face and stung it sharply. The mist upon his eye-glasses blinded him; he was forced to remove them, and then he did not see as clearly as was desirable.

So far, at least, there was little difficulty about keeping in the road; the not-yet-filled ditches on either side outlined it distinctly, for the most part, and the horses plodded on bravely, though heavy drifts came so frequently they were obliged to walk much of the time. Archer kept a sharp lookout for the expected fork in the road; in the swift-falling snow he began to fear they might miss it. After a time he asked, suddenly and a little anxiously, "Miss Everett, does the road seem familiar to you? We must have come fully four miles from the last fork, and I see no sign of another."

The girl drew away her scarf from her face and stared about her. "Why, I can't see anything," she said. "Are you sure we are in the road?"

"We are in the road all right," Archer asserted, "but that's about all I am sure of. We haven't passed a house since we left the other road—if I can tell, in this confounded snow, without my glasses. They steam up so I can't see anything with them, and not much without them."

"I beg your pardon," said Miss Everett, quickly. "I have been leaving it all to you, and forgetting everything in my anxiety. I will keep watch with you now."

She sat up straight beside Archer, and dropped her scarf to her shoulders. He looked around at her after a little and saw that the snow lay thickly upon her hair below the red cap. He picked up the scarf from her lap, shook it out, and gave it back to her.

"Put it on, please," he ordered, gently. "There is no need of your getting any wetter and colder than you are."

She twisted the scarf about her head again with a faint smile. "I felt as if I had been selfish," she explained, "letting you take all the exposure." Somehow those simple words

sounded painfully sweet in Archer's ears. "But really I'm afraid we're on the wrong road. It is certainly more than time for us to reach the fork—and there are several houses on the right road, too. It was very stupid of me not to notice as we came along."

There was evidently nothing to do but to retrace their steps. Archer turned the horses about with a good deal of difficulty in the deep snow, finding it necessary to get out and shovel a little to prevent the sleigh from upsetting. Once on the way, however, they were able to return with much less trouble than they had come. Their course lay down hill, they had a broken path, the wind was behind them, and in a comparatively short time they were back at the dividing roads. Just before they reached them Archer turned to his companion and said, earnestly:

"Miss Everett, it is nearly two o'clock. Though we must have gone over something like twenty miles by our mistake we are really only about half of that on our way. We can have come at the rate of not much more than five miles an hour. Don't misunderstand me—I am ready to go on if you wish it. But don't you think—for your own sake—we would really better go back to Mr. Anderson's? If this road is as badly drifted as the other we can hardly reach your home more than four or five hours before you could get there by train. The storm is growing worse—"

"Mr. Archer," she interrupted, facing him with a flash in her dark eyes, "I am very sorry to have brought you out into the storm. If you regret your offer you can get out at one of these houses and hire some one to take you back. I shall go on. I am not in the least afraid."

Stung to the quick he turned the horses into the other fork of the road, giving them almost involuntarily a fierce cut of the whip as he did so, in lieu of the words he was too much of a gentleman to speak. To say that he was astonished at her sharp speech would be putting it mildly. The girl sank back into her place, gathering her scarf closely about her face. After a moment, as the span dashed rapidly over a bit of better road, where a team had lately preceded them, she sat up again and laid her hand lightly on his arm.

"Forgive me," she murmured. "It was dreadfully rude of me. I did not really doubt your courage or your kindness—I know you better than that. It was only that this cruel anxiety was nearly driving me wild. And when you said we were only ten miles on our way—after all this time—it seemed as if I must fly to Brentwood. And four or five hours, you know, might make all the difference—"

He could hardly catch the last words, but the sob in her voice appealed to him. His sore and angry heart softened in an instant. He reached across with his right arm and clasped the hand which had touched him, forgetting everything but that he loved her and that she was in need of him. "I am the one to be forgiven," he said, almost under his breath. "I ought to have understood. We will go on—through anything." He withdrew his hand after one warm pressure, that he might not feel her take hers away. Then he spurred the horses on, his heart heating hard, the loughing gripping him more furiously than ever to have the right to keep that hand, the quick ache following because she had said that might not be.

He drove on doggedly from this point; the storm was momentarily increasing. It grew harder for the horses at every step; they were evidently much fatigued, but they were fine fellows, and they plowed through the deepening drifts with unfaltering courage. More and more frequently it became necessary for Archer to get out and do not a little tramping and shoveling to prevent horses and sleigh from becoming stalled.

They passed the second fork, making sure of their course by inquiry at a farm-house, and came after a time to a piece of woods, where the road was comparatively sheltered. Here Archer allowed the horses to rest for a few minutes. The respite from the rush of wind in the faces of the travelers was grateful, but it was short-lived, for to his surprise Archer found that it was half-past three, and a long eight miles lay before them, the first half, according to Miss Everett's remembrance, through a particularly barren and deserted stretch of country.

When they came out of the woods into the open again it seemed to them that the storm had intensified tenfold. The wind struck them with tremendous force, dashing the snow into their faces with the ferocity of some angry giant. For perhaps a mile the eccentric blasts had nearly bared the ground, and their sleigh grated and dragged. Then they ran into a stretch of gradually deepening snow, and suddenly, before they were aware of it in the blinding storm, they had plunged into a tremendous drift, and the horses stopped, panting and exhausted.

Archer sprang out with his shovel and began to work fast and furiously. He could see no way through the drift, but he hoped to be able to back out of it. The horses were submerged half way up their bodies; without realizing it he had evidently driven them into a ditch. He plied his shovel almost hopelessly, it seemed to him, the wind whirling the shovelfuls back into his face as he attempted to throw them to one side. He had never felt so small and insignificant in his life.

"There's only one thing to do now," he shouted back, as he worked. His voice hardly carried to the sleigh in the roar of the wind. Miss Everett leaned far forward over the dashboard to catch his words. "We must get back out of this if we can, and then try to find a house. Do you know of one?"

"Just one," she called back, "one good farm-house. It must be somewhere this side of those woods." She pointed back uncertainly through the eddying cloud of snow.

Archer's heart sank, for he thought that they must have come at least two miles since leaving the woods. He shoveled and trampled desperately, feeling that he must free the horses or own himself in a worse predicament than he cared to face. After doing all he could to liberate the animals he called upon them to help themselves; but though they responded with almost human intelligence they were unable to free more than their fore legs. Their haunches sank deeper into the snow with each effort; they were held as in a vise.

Miss Everett watched all this anxiously. As Archer paused breathless and looked around at her with a despairing shake of the head she sprang out and came to his side. "I must help you," she cried. "I'm strong; I can shovel while you help the horses." She went eagerly and vigorously to work, her scarf thrown aside, her cheeks glowing brilliantly with the exercise. Archer could not protest. The situation had certainly become serious. If they could not free the horses and go back, what then?

They worked hurriedly—desperately. The wind swept the snow into their faces, their ears, their necks; it was only their violent exertions which kept them from being very cold. At last, with a great heave and a tremendous effort, the horses freed themselves; but though Archer used the utmost caution in his attempt to back them about they suddenly sank more deeply than before into another part of the great drift.

Archer dropped the bridles and turned to his partner in ill-fortune. "It's no use," he said, hoarsely. "We shall simply exhaust ourselves for nothing. The only thing we can do now is to try to find a house."

Miss Everett turned and gazed back down the road. The road—was there—had there ever been any road? It was growing dark rapidly, though by Archer's watch it was only half-past four. All that could be seen was a great swirling mist of dusky white, now falling quietly for a moment, now driven by a fresh blast of wind into an impenetrable wall, through which these two human creatures could with difficulty see each other at close range. As for inanimate objects, not one could he made out—neither fences, trees nor houses—if there were any.

The girl faced about again, and coming close to Archer looked up into his face and spoke steadily. "I think that is the thing to do," she said. "I am ready. Will you lead?" It was as if she made a declaration of faithful comradeship through whatever might come.

Archer gazed back into her eyes without speaking until the dark lashes dropped. In this situation of extreme isolation and probable danger the rest of the world seemed to have dropped out of sight. She had not let him make love to her, but she was his friend—as she had said last night she would be. He had not cared for the lesser relationship then, but now it seemed a thing to be appreciated and cherished. He laid both hands gently on the girl's shoulders and bent to say the words very close to her face. "You're all I ever thought you—and more." Then he turned abruptly away and did his best, with her help, to blanket the horses, though in the violent wind it was a difficult matter. This done, he called "All ready! Follow me closely!" and plunged into the snow. After an instant's delay, while she lingered to pat the animals' handsome heads and lay her cheek against each smooth nose, she came after him. Her hand was brushing away something from her lashes—the snow, perhaps—as she left the creatures, who regarded her with almost human appeal in their eyes. There had been an odd constriction in Archer's throat as he watched the significant little act.

Ah, but it was hard work! The wind came from one side—not directly against them—which was something to be thankful for; but the progress along the road, or what appeared to be the road, was made with great and ever-increasing difficulty. Archer sometimes feared they might not be in the road at all, but had begun a hopeless wandering in some barren field. Even if they were in the road they could easily pass a farm-house without recognizing it. He hardly dared to estimate how long their strength would last.

He felt himself growing more and more weary as he plowed through the heavy snow. The sum of his labors during the last two hours had been immense; and now, as hope slowly faded, he found his physical powers waning alarmingly fast. When they had traveled perhaps half a mile in this slow and fatiguing way he had no breath left to speak encouraging words to his companion. He plodded on with ever-weakening strength, only turning about from time to time to make sure that she followed. But each time he heard her cheerful "I'm here," and blessed her for her courage.

On and on, on and on—persistently, doggedly, drearily. One who has never found

himself in such a situation can hardly appreciate its possibilities for wearing out muscle, nerve and heart. At last Archer stopped. It seemed to him impossible that he should ever take another step. He had been thinking for the last ten minutes of his college days, when he had been a good deal of an athlete, and had even made something of a record in certain directions. He still possessed the frame and appearance of a unsexually strong man, but in the years which had come after college, and especially in the latter ones, during which most of his waking hours had been spent over the desk in his office, his physical endurance had very markedly deteriorated without his perception of the fact. It seemed to him now that he was giving out absurdly, unmanfully soon, but given out he had—for the time at least.

As he stopped Miss Everett came close to him, then pressed past him, and turning, looked anxiously up into his face. The rich color glowed in her own; she was tired, but she was only just through with her college course, and she had been the pride of the college on the basket-ball team. She had a large stock of strength yet left, unexhausted by such severe labor as Archer had done before she came to his aid. But as she looked earnestly and solicitously into his face the color retreated a little from her own.

"Oh, don't say you are tired out!" she cried. "We can't stop here!"

"Just a minute," gasped the man, trying hard to pull himself together. "Let me rest a minute."

"Are you cold?" she demanded.

"A little," he breathed. "I—I'm—tired—" and then he could say no more; he was concentrating his whole soul on the effort to remain standing and not sink down in the snow and frighten her. A horrible and humiliating faintness assailed him, against which he struggled helplessly—he had had no previous experience in that line.

At this moment he felt her hand grasp his with the firm pressure a man comrade might have given; at the same time an arm came about him and embraced him closely. "Lean against me," she was saying, in a tone full of sympathy and cheer. "No wonder you are worn out, with all you have done. You'll be all right in a minute."

Her grasp supported him strongly; it gave him just enough help to relieve his faintness; after a little his overstrained heart began to beat more regularly. It was something to revive an exhausted man to feel himself clasped and held by arms he loved so well, even though he understood that she did it as she had caressed the horses—her warm heart would bid her help any creature in distress.

All at once he felt a singular sensation, first of pressure, then of warmth, in the very middle of his back between the shoulder-blades. It grew more and more intense; it was fairly hot. It seemed to arrest a little the terrible chill which was creeping over him. What was the girl doing?

"Does it warm you?" asked her clear voice in his ear. "That's an old trick I learned when a child. One can blow a whole furnace of heat into a person that way. Are you rested a bit now? Can we go on a little?"

How brave and womanly she was! It was enough to daunt the stoutest girl's heart, he was thinking, to find herself in such a situation as this, her only companion a poor weakling of a man who not only could no longer help her, but who was in danger of becoming a hindrance and an actual source of peril. Archer fiercely underrated himself in these trying moments. Of what use was it to have written clever and incisive and brilliant paragraphs, and to be considered one of the brightest of the younger men who were filling editorial chairs, if he were to be outclassed by a woman in a stress of circumstances which called for mere physical strength? It is safe to say that he would have given his literary reputation at that moment for the power to take Ruth Everett in his arms and push his unflinching way with her through the snow-drifts to a place of safety. Ten years ago, he thought, bitterly, he could have done it.

She began to lead him now, plowing ahead herself and still holding him by the hand with that warm, firm clasp which would have sent the blood coursing sturdily through his arteries if anything could. But he was getting beyond the point where help, even from her, could reinforce his ebbing energies. After a few rods, in which he followed the pull of her hand blindly, he found all his sensations merging into one—an overpowering desire to give it all up and lie down somewhere—anywhere—and no matter what.

If she only loved him—if she were only his—if he could just fold her in his arms and press his frozen lips to her beautiful warm ones—ah, that would be heaven! He should not mind dying here with her. And the soft white snow would gently cover them both—and this terrible struggle would be over.

What was that? Was she calling to him? It could not be his own name that he heard—"Stuart"—she would never call him that—she did not love him. But it did not matter now—he would just sink down here—alone—and—

"There, now, the poor feller's comin' round all right, Miss Everett. Jest you lie still and be easy in your mind. He did seem pretty far gone, but I guess he wa'n't as near froze as we thought—jest sort o' done out."

The words penetrated Archer's mind with difficulty. Was this the way the angels talked? He had never supposed so much of a Yankee twang remained in the celestial voices. However, that mattered little; it was this delicious sense of rest lapping his weary body which made him certain that he had reached Paradise. He would not open his eyes yet—he would just lie here and he still—and warm—warm. Ah, why—well, yes, he would open his eyes, after all. That was her voice. She was here, too.

"Thank you, very much," he heard her saying, softly. "I am very comfortable now. Are you sure Mr. Archer is better?"

Archer unclosed his eyes. He attempted to say that he was perfectly well, but the most he was able to accomplish was the turning of his head in the direction of her voice.

By and by he could move, sit up; and then they put him in a big chair by the fireplace, where he could sit and look at her. She was lying on a couch on the other side of the fire, her face a little pale, but her eyes very bright and a most gentle expression about her mouth. She seemed like a tired but happy child.

Archer learned that they were but five miles from her home. The physician who attended her mother had stopped here earlier in the day and had reported Mrs. Everett much less seriously injured than had been at first supposed. Mrs. Everett's daughter had had no cordial to revive her exhausted spirits like that news.

"For she was pretty near clean tucked out," his host explained to Archer. "I dunno as she'd 'a' kep' on ten foot further. But she managed to tell us where you was—and I guess if we hadn't found you mighty soon after we started out she'd 'a' been headin' the relief expedition. She jest wouldn't give up till she heard we had you. Beats all how a woman'll keep up till the very last thing's done that could be expected of her. To be sure, she didn't hold out till we had the horses safe—but they not bein' human critters I dunno's that could be expected."

There was a delicate tinge of color in the girl's pale cheeks now, and she had turned her face away from the fire-glow. Archer thought, with a great thrill of pain, that if he did not know beyond a doubt that it could not mean anything it would not be hard to imagine that it did.

When the two were left alone, while their entertainers got supper and prepared sleeping-apartments for them, Archer let a long silence fall. When he spoke at last it was in a very grave tone, which somehow had in it an effect of self-repression.

"It's plain that I owe my life to you," he said.

"I can never forget," returned Miss Everett, slowly, without turning her head toward him, "that your life would not have been in danger but for me."

"I shall never cease to be glad," said Archer, gazing into the depths of the fire with a peculiar glow in his fine gray eyes—the reflection of what he saw there, perhaps—"that my experience of you did not quite end last night."

She did not ask why, but the question was in the quick, involuntary movement of the hand which lay in her lap.

"Because," he went on, still without looking at her, but quite as if he and the fire were exchanging confidences, "sure as I was then that I had given my heart to the one woman in the world, I know now—" his voice shook, for he was still weak from the severe strain he had undergone; he could not trust himself to finish that sentence. After a minute he began another. "It was something for me to remember all my life—that you saved it for me—and yet—"

"And yet—" It was almost under her breath, but he heard it, and it set his heart to galloping like a steam-engine. Why should she care to have him finish his sentences, since the knowledge of the feeling lying behind them was distasteful to her? Perhaps she did not realize just what she was doing. But he answered her presently, when he had gotten himself well in hand, "It's a cowardly thing to say, I suppose, but—I'll say it. I—I know it would have been easier to die there—in your arms—than it ever will be again."

He could see only the smallest portion of her cheek as she lay, but that portion was unmistakably of a brilliant color. He sat watching it with the conviction that he could stand but very little more of this sort of thing without giving way to a passionate prayer to her to reconsider her decision of last night. She had not blushed last night. And certainly, if she wished to continue to keep him at arm's length, she was not taking exactly the surest way.

All at once—what was this that stretched itself toward him—her hand? He was out of his chair in an instant and down upon his knees by the couch, the hand seized in both of his, his heart leaping deliriously. There was certainly no need now for her to extend to him the hand of a comrade.

"What do you mean?" he was asking, incredulously. "You can't mean—oh, don't give me a bit of hope if you don't mean—everything! I couldn't bear it again!"

Any sane man would have been momentarily expecting the return of his host and hostess, but Archer was beyond caring who heard or saw him as he bent over the figure on the couch. The girl's head remained persistently

turned away, but her hand lay warmly in his. His head was whirling—these changes from extreme cold to heavenly warmth seemed equally disconcerting to body and soul.

"Tell me," he whispered. "tell me, Ruth—dear!" Then his hand stole under the cheek which was farthest from him and gently but firmly turned the brown head toward himself till—suddenly the face was hidden from his strong gaze, it was so close against his breast.

"I couldn't let you die," she murmured, "because I found out I couldn't spare you, after all."

2

OCTOBER DAYS

Along the wood the goldenrod
And pale blue daisies bloom,
While shades of summer fades away
Beneath the silver moon.
The maples and the stately oaks,
The shrubs and trailing vines,
Are robed in gorgeous beauty
Before the dark-green pines.

The long, dark range of purple hills
Are veiled in amethyst,
And o'er the bay each morn there hangs
A soft, thin pearly mist.
And in the twilight's deepening shade
Merry crickets pipe their lays,
And there's a glory in the woods
In bright October days.

—Adelbert Clark.

2

NAVAJO INDIAN HOMES

In New Mexico and Arizona the Navajo Indians, who have been but little affected by the march of civilization, have homes which show unchanged ideas of hundreds of years ago. Rude and primitive as the houses of the Navajos are (hogans, they call them), every detail is dictated by rules strictly adhered to. The erection of one is real ceremonial, followed by an elaborate ritual of dedication.

Thousands of examples of these queer Navajo houses are to be found in the Navajo reservation, and hundreds more are built every year. The hogans are hidden away so effectually that travelers unaccustomed to the country might go for days and not see more than a dozen, and get the impression that the country is practically uninhabited, yet the tribe numbers twelve thousand.

The site the Navajo prefers for his home is either a sheltered nook in a mesa or a southern slope on the edge of a grove of pinon or cedar. Seldom is a house built close to a spring or other water. It is probable that this custom of half-concealed habitation is a survival from the time when the Navajos lived by plunder and momentarily expected reprisals from their victims. When the site is selected the family moves to the place, taking all their possessions with them, including the flocks of sheep and goats and herds of horses and cattle. The hostess, as the head of the family is called, drives the ponies and cattle; he carries his arms, for the coyotes may be troublesome at night, two or three blankets and a buckskin on his saddle, but nothing more. After him comes a flock of sheep and goats, bleating and nibbling at the hushes and grass as they slowly trot along, urged by the dust-begrimed squaw and her children.

Search is made for suitable trees. Three of them must terminate in spreading forks, but the other two, which are intended for the door frame, are chosen for their straightness. The timbers are laid on the ground with their forked ends together, somewhat in the form of the letter T, extreme care being taken to have the butt of one log point exactly to the north, another to the south, and the third to the west. The straight timbers are then laid down, with the small ends close to the forks of the north and south timbers, and their butt ends pointing due east.

When the tsadi, or frame of five timbers, is completed the sides of the structure are filled in with smaller poles and branches of trees set as closely as possible on the ground and laced and bound together. At the same time other workers construct the door frame, which in appearance is like a dormer-window. Two straight poles, with forked tops, are driven into the ground at the base of and close inside of the doorway timbers, a cross stick is placed in the forks and another on the doorway timbers, at the same level. This provides the basis for a flat roof, the space between it and the apex of the hogan on the sloping side being left open for a smoke-hole. The sides of the projecting doorway are filled in with upright sticks. The entire structure is next covered with cedar bark, and earth is then thrown on to a thickness of about six inches, making the hut perfectly wind and water proof. This completes the house.—Scientific American.

2

TAKING THE CENSUS

Down at the census office are a thousand or more electrical machines that can almost talk, and the labor they save is impossible to calculate. But for them it would require several thousand clerks several years, to tabulate and classify the information sent in by the fifty thousand enumerators regarding the seventy-five million people who compose this great and glorious republic.

The first thing to be done when the returns of the enumerators are sent in upon large

sheets of paper will be to transfer the information they contain to strong manila cards about four by eight inches in size. The cards are impersonal, but each bears a number and represents a citizen of the United States. Eighty million cards have been provided. Upon this card are two hundred and forty symbols, which represent every item of information that could possibly be reported by an enumerator under his instructions—birth-place, age, color, sex, occupation, number of children, etc. For example, the "W" over at the left-hand upper corner of the card means white; "B," black; "Ch.," Chinese; "Jp.," Japanese; "In.," Indian. In the next row "M" represents male and "F" female. Over in the other corner are the signs for place of nativity, which can easily be identified, the upper letters representing the states and the lower ones foreign countries—"En.," England; "S. A.," South America; "Dk.," Denmark; "Sz.," Switzerland; "Php.," Philippine Islands.

This card is placed upon a machine that resembles one of those tracing instruments used for transferring maps, and the keyboard corresponds exactly to the lettering. The operator, glancing at the return of the enumerator, moves the key over the board and places it carefully upon the spot represented by the symbol wanted. This causes a little knife to pierce a hole in the card at that precise spot, and when the operation is completed the card resembles the perforated sheets that are used in orchestrations and automatic pianos.

When all the returns from a census district have been transferred in this manner from the enumerator's sheets to the cards the latter are packed away in a tin box, properly marked, each box being large enough to hold two thousand cards, and it can be easily stored away with other canned statistics, each box bearing a label indicating its contents.

I do not think I can describe the enumerating-machine so that the reader can understand it. It is about the size of an upright piano. Upon the upright part is a set of dials, like steam-registers, one for each of the items embraced in the population schedules. When the operator runs through this machine the manila cards, as above described, and closes an electric circuit by moving a lever, a little rod runs through each hole in the card and causes the dial at the other end of a wire to register one. Therefore, when the operator has completed the pile of cards and has run them all through the machine, the information they contain has been accurately transferred to the several dials, and the operator can take the totals off on a slip of paper prepared for that purpose. The dials will show how many people represented by those two thousand cards were born in Ireland and how many in Ohio; how many are married; how many naturalized citizens, and all the other answers to the inquiries imposed by Congress upon the many enumerators.

The economy of this remarkable method was illustrated beyond a question in the last census, and can be appreciated when it is known that Alexander Maurice, one of the clerks in the last census, averaged 13,356 cards a day—about six and a half hours' work—while his highest record for any given day was 19,071 cards.

Anybody who will compare this work with the old-fashioned tally-sheets, with closely packed lines of figures, which used to drive some of the census clerks blind and others crazy, can realize the value of the enumerating-machine, which could not make an error under any circumstances. It is estimated that in the last census these machines saved not less than \$600,000 in clerk hire.—W. E. Curtis, in Chicago Record.

2

HOSPITAL FOR BIRDS

The doll doctor is dead, but the bird doctor still lives. He isn't even ill. He hasn't time to be. Besides, if he fell ill there would be no one to look after his feathered patients, for he has no assistant, and he alone seems to know the secrets of the profession. Like the doll doctor, his hospital is in Columbus avenue, but nearly a mile further north. It is in a modest store near Nintyeth street, and this sign hangs in the window:

SICK BIRDS CURED AND VOICES RESTORED
AT TWENTY-FIVE CENTS A WEEK

In the window are several cages containing the oddest lot of birds outside the Bronx Park Zoo. Some of them sing songs rarely heard in this climate, and others are as silent as the grave. All are of striking plumage, and several are nearly as small as the humming-bird. The most valuable of the lot are natives of Japan. One pair that sit throughout the day on a perch in their cage without uttering a note have a habit of drawing their heads in after the fashion of turtles, and when thus posed they look like shooting-gallery targets reduced to a very small size. These window birds are not patients. They are the property of the doctor, who exhibits them to draw attention to his hospital. He is a husky-looking man of fifty or thereabouts, whose full beard is fast turning gray. He speaks with a German accent and wears a linen coat and a yachting-cap.

There are private rooms in the hospital, and the institution is democratic to a marked degree. The charge is the same for all birds, be they Murray Hill or Cherry Hill. What might be called the wards of the hospital are shelves which extend along the walls nearly the length of the store. On them are placed the cages containing the sick birds. The vast majority of them, of course, are canaries whose owners live in the neighborhood. Most of the birds suffer from colds, which put them out of the singing business temporarily. Often a canary becomes so hoarse that it cannot sing a note, and even after the cold goes away the voice is not restored. It is to these cases that the bird doctor devotes most skill and attention.

In the summer, when business gets slack because the doctor's customers go out of town, one side of the hospital is turned into a boarding-house for birds. The terms for board are exactly the same as the terms for treatment. At present there are about fifty boarders in the hospital, and their songs serve to cheer the drooping spirits of the patients, as well as to spur them on to renewed efforts with the voice. The boarding-house feature is a great convenience to the owners of songsters who wish to close their houses or apartments for the summer and not lug the bird-cages along with them to the mountains or seashore. Surely none of them can complain of the price.—New York Sun.

RED CROSS DOGS

Where the ambulance or Red Cross dog scores on the battle-field is in this: The wounded man but for timely help stands great risk of either receiving attention when it is too late or perhaps is overlooked altogether in the search.

The dog is so splendidly trained that, once set free, he immediately commences his search, and on finding a wounded man returns to his leader and guides him direct to the spot, the bearers following at a given signal.

Herr J. Bungartz, the famous animal-painter, to whom I am indebted for information, is the president of the Society of Red Cross dogs, which he himself founded in 1893, under the distinguished patronage of the Duke of Edinburgh. This society, which, by the way, has some seven hundred members enrolled, undertakes the breeding of these dogs and training them for the German-army service. One is glad to hear that the breed of dog used, and which alone is to be relied upon, is the Scotch collie. At a recent trial at some maneuvers in Germany the dogs behaved remarkably, scenting the men, who had hidden themselves in a densely grown wood, in a few minutes.

The society possesses breeding and training stations at Lechenich, Rhenish Prussia, where there are about twenty dogs. Naturally the dogs are taken in hand when young (five months old), and great care is observed so as to avoid any undue compulsion in their training.

The day's work commences at dawn, when the animals are turned out into the fields. After a few hours' coursing they are groomed thoroughly, and at midday receive their feed—which only takes place once a day—consisting of dog-cake, broth and vegetables. Gradually the training is increased in difficulty, and thickly grown forests take the place of the open field. The dogs never leave the kennel except to be trained, so they lead anything but an idle existence.—The London Golden Penny.

THE STORY OF ELEVEN POOR BOYS

John Adams, second president, was the son of a grocer of very moderate means. The only start he had was a good education.

Andrew Jackson was born in a log hut in North Carolina, and was reared in the pine woods for which the state is famous.

James K. Polk spent the earlier years of his life helping to dig a living out of a new farm in North Carolina. He was afterward a clerk in a country store.

Millard Fillmore was the son of a New York farmer, and his home was a humble one. He learned the business of a clothier.

James Buchanan was born in a small town in the Allegheny mountains. His father cut the logs and built the house in what was then a wilderness.

Abraham Lincoln was the son of a wretchedly poor farmer in Kentucky, and lived in a log cabin until he was twenty-one years of age.

Andrew Johnson was apprenticed to a tailor at the age of ten years by his widowed mother. He was never able to attend school, and picked up all the education he ever had.

Ulysses S. Grant lived the life of a village boy, in a plain house on the banks of the Ohio river, until he was seventeen years old.

James A. Garfield was born in a log cabin. He worked on the farm until he was strong enough to use carpenter's tools, when he learned the trade. He afterward worked on a canal.

Grover Cleveland's father was a Presbyterian minister with a small salary and a large family. The boys had to earn their living.

William McKinley's early home was plain and comfortable, and his father was able to keep him at school.—Rocky Mountain Advocate.

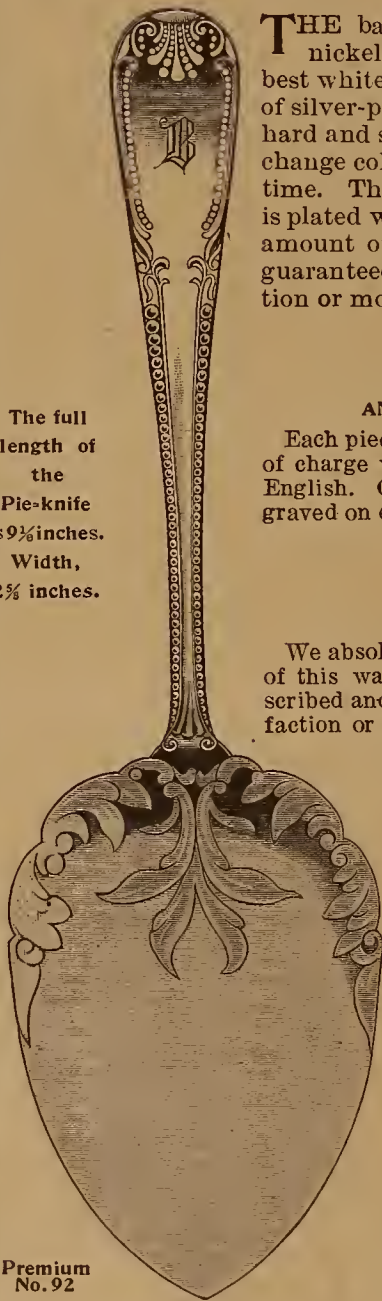
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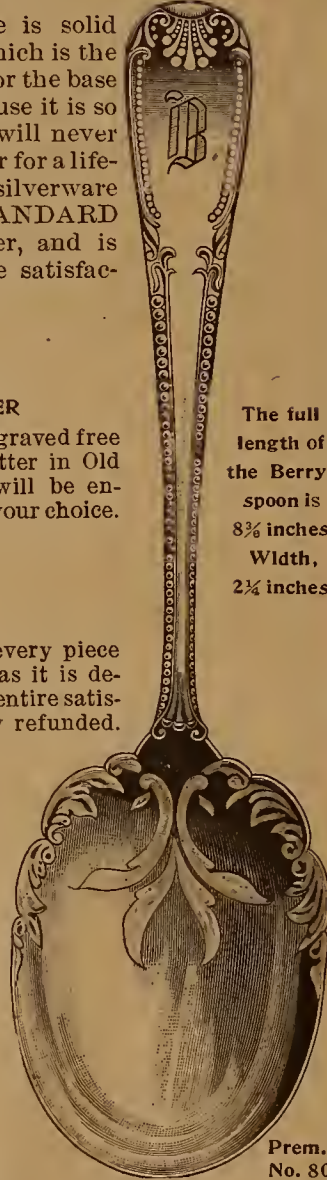
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TAKE HEART

Every day is a fresh beginning;
Every morn is the world made new;
You who are weary of sorrow and sinning
There's a beautiful hope for you—
A hope for me and a hope for you.

All the past things are past and over,
The tasks are done and the tears are shed;
Yesterday's errors let yesterday cover;
Yesterday's wounds which smarted and bled
Are healed with the healing which night has shed.

Yesterday now is a part of forever,
Bound up in a sheaf which God holds tight;
With glad days and sad days and bad days
which never
Shall visit us more with their bloom and
their blight,
Their fullness of sunshine or sorrowful
night.

Let them go, since we cannot-relive them,
Cannot undo them and cannot atone;
God in his mercy receive and forgive them;
Only the new days are our own;
To-day is ours, and to-day alone.

Here are the skies all burnished brightly,
Here is the spent earth all reborn;
Here are the tired limbs upspringing lightly
To face the sun and to share with the morn;
In the chrisom of dew and the cool of dawn.

Every day is a fresh beginning;
Listen, my soul, to the glad refrain,
And spite of old sorrow and older sinning,
And puzzles forecasted and possible pain,
Take heart with the day, and begin again.
—Susan Coolidge.

HOEING YOUR ROW

A HOMELY phrase, suggestive of patient work under a broiling sun, a hand-to-hand conflict with the soil; the secondary meaning is that of persistent, energetic and steady performance of duty. It may not be pleasant; very probably there is something else going on which you would much more enjoy; perhaps you are tired, and this drudgery is obscure and you will get no thanks for it. Nevertheless you have it to do; it is your task; you must hoe your row. Having begun, you must persevere until you have reached the appointed conclusion of your particular stint. Nobody else can do your share; you must do it yourself.

A sort of Spartan indifference to mere comfort and convenience, a Puritan sense of responsibility, a very commonplace but nevertheless very admirable virtue, are all more or less implied in the every-day accomplishment of an every-day task in the careful hoeing of your row.

Perhaps you live with uncongenial people, who constantly rub your fur the wrong way. Perhaps you are handicapped by imperfect preparation for the work you have undertaken. Perhaps your environment has been an unhappy one, and certain parts of your nature have never been developed as they might have been in more favoring conditions. Never mind. Without asking special consideration, without fretting, without weakening in the face of difficulty or danger, you must just bear steadily forward, hoeing your row.

After awhile you will arrive at a place where you will discover how disciplinary are the processes through which one passes in simply accomplishing a regular task in a regular and possibly a humdrum way. The pianist, for instance, in the finger-practice which is repeated and repeated, and gone over hour after hour, day after day, week after week, gains a smoothness, precision and facility which could be acquired in no other way. A great deal of skill in many lines is simply the accumulation of years of all-day labor, the faithful hoeing of the row leading to the most wonderful and gratifying results.

Onesometimes has disagreeable things to do—things which one would like to shirk, things which are among the penances and humiliations of life. If they are clearly in the ordering of duty, if they belong to the catalogues of must-

bes, then the only escape from an accusing conscience is in getting them done at the earliest practicable moment. They somehow come into the realm of that steady, self-repressing, self-forgetting routine of actions which may be described as hoeing one's row. "Blessed be drudgery," a wise man has pithily said. And blessed be whoever accepts drudgery in a cheerful and contented, and even thankful spirit. For after the hoeing of the row there follows the green leaf, the bloom, the fruit, the fragrance and the glad abounding joy of harvest. These follow. Before these came the hoeing of the row.—Harper's Bazar.

DO WHAT YOU CAN

If you cannot do all you would like to do, do the best you can. If your parents cannot afford to give you a thorough education, and you are not able to work your way for yourself, don't give it up and sit down to a life of ignorance. There are many ways in which you may do much to educate yourself, and if you will you may yet fit yourself for a high position in the world. Make the best use of the means that come in your reach, and whatever you learn make it thoroughly yours.

Never be discouraged because you cannot climb to the mountain-top all at once. Half way up the steep side you would have a much better view than if you remain where you are, down in the valley. Climb as high as you can, but be sure that you climb.

As you look around you and see the needs of the poor and destitute, and your heart yearns to relieve all their wants, be sure that you do something. It is well when you put your hand in your pocket and wish it were full of gold, but it is better if you share the few pennies that you have. A little may go a great way with one who is hungry and cold, and you can make your own the old-time commendation: "She hath done what she could."

Do what you can, whatever your position, and remember that the honor lies not in the part itself, but in the way it is performed.—Exchange.

CANTICLE OF THE ROAD

BY ARTHUR COLTON

A draught of water from the spring,
An apple from the wayside tree,
A bit of bread for strengthening,
A pipe for grace and policy.
And so, by taking time, to find
A world that's manly to one's mind;
Some health, some wit in friends a few,
Some high behaviors in their kind,
Some dispositions to be true.
—Atlantic Monthly.

THEY, TOO, LOVED HIM

Under the white dome beneath which rests our best-beloved soldier, General Grant, people were coming and going one Memorial day, looking with reverent gaze upon the fresh wreaths of flowers which so beautifully typified the undying remembrance in which the nation's loved one was held. And one thing especially pleased us—to notice how many of the crowd were children. Grave little faces looked down from the railing upon the heap of flowers below, and their owners knew why they looked. Evidently they, too, loved his memory.

As the hushed throng pressed about the rail, looking down to where the hero sleeps, a little voice broke the silence with a half sob, "I can't get near enough to see." And another voice answered, without the least hesitation, "We'll have to crowd up and give you a chance, then." No sooner had the words been spoken than several little lads, some with black faces and some with white ones, moved and crowded and "hunched along there" till there was room enough for another little form to squeeze close in beside them.—Sunday-School Advocate.

A COMMON TROUBLE

Thousands Suffer From It Without Knowing Its Real Character

No trouble is more common or more misunderstood than nervous dyspepsia. People having it think that their nerves are to blame, are surprised that they are not cured by nerve medicines and spring remedies; the real seat of mischief is lost sight of; the stomach is the organ to be looked after.

Nervous dyspeptics often do not have any pain whatever in the stomach, nor perhaps any of the usual symptoms of stomach weakness. Nervous dyspepsia shows itself not in the stomach so much as in nearly every other organ; in some cases the heart palpitates and is irregular; in others the kidneys are affected; in others the bowels are troubled, with loss of flesh and appetite, with the accumulation of gas, sour risings and heartburn.

Mr. A. W. Sharper of No. 61 Prospect Street, Indianapolis, Ind., writes as follows: "A motive of pure gratitude prompts me to write these few lines regarding the new and valuable medicine, Stuart's Dyspepsia Tablets. I have been a sufferer from nervous dyspepsia for the last four years, have used various patent medicine and other remedies without any favorable result. They sometimes give temporary relief until the effects of the medicine wore off. I attributed this to my sedentary habits, being a book-keeper, with little physical exercise, but I am glad to state that the tablets have overcome all these obstacles, for I have gained in flesh, sleep better and am better in every way. The above is written not for notoriety, but is based on actual facts."

Respectfully yours, A. W. Sharper,
61 Prospect St., Indianapolis, Ind.

It is safe to say that Stuart's Dyspepsia Tablets will cure any stomach weakness or disease except cancer of the stomach. They cure sour stomach, gas, loss of flesh and appetite, sleeplessness, palpitation, heartburn, constipation and headaches.

Send for valuable little book on stomach diseases by addressing Stuart Co., Marshall, Mich. All druggists sell full-sized packages at 50 cents.

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this beautifully 14k gold plated, double hunting case elegant engraved, stem wind and stem set watch, fitted with a finely jeweled, accurately adjusted movement, guaranteed a correct timekeeper, the finest in the world for the price. After examination if you consider it a great bargain, and equal in appearance to any \$35.00 gold filled watch warranted 20 years, pay the express agent our special introductory price \$3.95 and the watch is yours. Mention if you wish ladies or gents size. H. FARBEN & CO., 23 Quincy St., Chicago, Ill.

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Our new 1902 style Square Quaker guaranteed best of all cabinets at any price. Has real door on hinges, steel frame, best materials, rubber lined, folds flat, lasts 20 years. Turkish and Vapor baths at home 8c each. Open the millions of pores, sweats poisons out of the blood, keeps you clean and healthy, beautifies complexion. Physicians recommend it for Colds, LaGrippe, Rheumatism, Neuralgia, Obesity, Female Ills, all Blood, Skin, Nerve or Kidney troubles. Money refunded after 30 days use, if not as represented. Price with heater, directions, formulas, \$5.00. Free Steamer \$1.00 extra. Order today. Write us. Valuable Book FREE. Big Wages. Splendid Seller. Agents Wanted. World Mfg. Co., 87 World Bldg., Cincinnati, O.

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UNCLE DAVID'S SUMMER BOARDERS

We've been takin' summer boarders—they come down a week ago—
Thought we'd make a little extry, kind of on the side, you know—
Had a piece put in the paper so's to let the people see
Just what kind of 'commodations we could give 'em—ma and me.
Purty soon we got a letter from some people up in town,
Sayin' they had read about us, and they'd bring the children down.

Ma and me done lots of plannin' when we'd got the bargain made,
As to how we'd use the money that the summer boarders paid;
I says, "Ma, you've got to spend it buyin' clothes n' things you need."
But she shook her head, decided, and she answered, "No, indeed!
You've been wantin' a new huggy, 'n' the barn needs roofin', too—
I won't touch a penny, but I leave it all fer' you."

There is purty Mrs. Pimley, with her little bits of feet,
That somehow you're always seein', and her smile so awful sweet;
And there's Pimley with his golf-sticks, 'n' his coat as red as blood,
And their little darlin' daughter, like a rose jest in the bud;
And, besides them three, another—if I'd saw him first, I vow
We'd of took no summer boarders, and we'd still be happy now.

First a wheel run off the wagon, smashin' things all up; but, oh,
Little Willie didn't do it! He's so innocent, you know!
Then we found the turkeys crippled—hit with stones 'n' sticks 'n' things—
Couldn't blame sweet little Willie—all he hasn't is the wings!
There's a dozen broken winders, 'n' the pump's all out of gear,
And the chickens run for cover since dear little Willie's here.

Gates somehow keep comin' open, so the pigs go tearin' loose
In among the corn 'n' taters, rootin' round to beat the Jews!
Guess our fruit'll be a failure from the way it's droppin' down—
My! I wish these summer boarders had to hurry back to town!
Barn most caught fire Monday—burned a ton of hay; but, oh,
Little Willie never done it! He's too good for that, you know!

Worst thing happened, though, when Pimley, with his red coat on, went out
To the pasture where the cattle had been left to browse about;
He was husy knockin' golf-balls when our Jersey hull caught sight
Of that coat, and come a-tearin' down the hill with all his might!
There was bags and golf-sticks flyin'—with a man up in the air—
Little Willie'd been an orphan if the fence had not been there.

Well, the doctor's very hopeful—thinks he'll pull the patient through—
He has bruises 'most all over, and a broken rib or two;
And they say I'll have to settle—it'll be a whoppin' bill!
We've got through this kind of busness—me and ma have had our fill.
I don't wish these town-folks roasted—that, you know, 'd he a su—
But I've got a big sign painted: "NO MORE BOARDERS TAKEN IN!"
—S. E. Klsner, in Chicago Times-Herald.

THE BRIDE FOUND HER TONGUE

MY WIFE has had her curiosity appeased in a way that will satisfy her for some time," said the newly married man, as he smiled. "It was my idea to make our wedding trip as quiet as possible and do away as much as we could with the annoyance that usually attends wedding couples. But the lady said that she was proud of being a bride, and that she wanted to hear the comments that people would make. With this end in view she hit upon the crazy notion of playing deaf and dumb and going through a lot of monkey-shines with our fingers to carry out the scheme. She reasoned that this would cause people to talk in our presence, and thus we would be able to hear what they said.

"I opposed the idiotic idea from the start, but what I said cut no figure, and I had to consent to the plan. Our first chance to try the scheme occurred in a railway-station, where we were waiting for a train. My wife

commenced her pantomime, and I had to carry it through, feeling like a fool while I was doing it. She wobbled her fingers, and I wobbled mine, and we soon had every one staring at us. There were two women seated back of us, and the comments she desired so much to hear soon came.

"It's a newly married couple," said one. "The poor things are deaf and dumb. Isn't it awful?"

"What do you suppose he saw in her?" asked the other. "She is positively homely."

"And I believe her hair is bleached," said the first woman.

"And her hat is out of date," was the next starter.

"Looks like an old one made over," was the reply.

"Her dress wrinkles in the back," said the first.

"She's thirty-five if she's a day, and she looks as if she had a frightful temper," put in one of them.

"Right there my wife found her tongue, and her remarks to those two women left no doubt about her having that important article that women are supposed to exercise so freely."—Detroit Free Press.

JOHNNY GREEN'S ESSAY

After reading "The Old Oaken Bucket" to her pupils the teacher requested them to write an essay on the subject, and gave them twenty minutes in which to perform the task. Johnny Green was the first young idea to turn the results of his labor over to the schoolma'am.

"What is this, Johnny?" she exclaimed.

"My ethay," lisped the youngster.

"Your what?" repeated the teacher.

"My ethay," again lisped Johnny, triumphantly.

The teacher looked at Johnny and then at the paper.

"What is that?" indicating figure one.

ESSAY ON THE OLD OAKEN BUCKET



"The old oaken bucket," was the response.

"And that?" pointing to figure two.

"The iron-hound bucket."

"And this?"

"That's the moth-covered bucket."

"And that?" said the teacher, in despair, pointing to figure four.

"Oh, those are the spots that my infancy knew."

The teacher gave him ten.

HOW KIPLING CRUSHED A BORE

I met a traveler who came from the Cape aboard the steamer on which Rudyard Kipling made the passage, and he had some good stories to tell of the author. Kipling was pestered by a flock of passengers who wished to gush over him and hero-worship him.

Kipling, you know, is not built that way, and puts up impatiently with gush and hysteria. One forenoon Kipling was walking the deck hand in hand with his little daughter when one of the gushers, seeing an opportunity to flatter the father and so make friends with the author, threw himself in the way of the couple.

"Oh, Mr. Kipling," he gushed, "is that your child?"

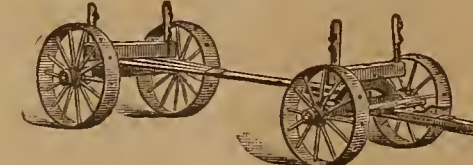
Kipling grunted a non-committal "yes," and tried to pass. But the fellow was not done with him. Still standing in the way, he exclaimed:

"What a delightfully beautiful and healthy child she is!"

Kipling gazed at stony gaze at the man, and saying, with great emphasis on the personal pronoun, "I'm reasonably satisfied with her make," he shouldered past the bore and tramped on.—Philadelphia Post.

FARM WAGON ONLY \$21.95

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Company, Quincy, Ill., have placed upon the market a Farmer's Handy Wagon that is only 25 inches high, fitted with 24 and 30 inch wheels with 4-inch tire, and sold for only \$21.95.



This wagon is made of the best material throughout, and really costs but a trifle more than a set of new wheels, and fully guaranteed for one year. Catalogue giving a full description will be mailed upon application by the Empire Manufacturing Co., Quincy, Ill., who also will furnish metal wheels at low prices made any size and width of tire to fit any axle.

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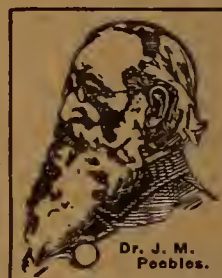
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Dr. J. M. Peebles.

For years scientists have been making researches, with startling revelations as to the mysterious power concentrated in what is known as Psychic Force. Skepticism, that had been rampant, has now been dispelled by the appearance of a man in the arena who is known and honored throughout the civilized world. It is the eminent scientist, Dr. J. M. Peebles, of Battle Creek, Mich., who for his life-long service in behalf of suffering humanity has been honored by the Anthropological Society of London, Eng., the Academy of Art and Science, Naples, Italy, and the Academy of Science, New Orleans, La., and was also appointed by the National Arbitration League to the International Peace Commission of Europe. This grand old man has been making researches for the past 50 years, and has at last been able to place the curing of all diseases into the domain of an exact science. He is the **GREATEST SCIENTIST AND SEER OF THE AGE**, his occult power is indeed remarkable. His treatment is the combination of the **PSYCHIC AND PHYSICAL**. He has found the **MISSING LINK**. While he does away altogether with **DRASTIC AND POISONOUS DRUGS**, he combines with his mysterious power magnetic medicines prepared in his own laboratory. It is solely a **HOME TREATMENT**, and is given in the **PRIVACY OF YOUR OWN HOME**, without the knowledge of anyone but yourself. Many a poor woman suffering untold agonies from diseases peculiar to her sex has been brought into the sunshine of health through this wonderful power. The same can be said of men who suffer through early indiscretions. The loss of vitality as well as private diseases have been cured by this great scientist when these cases had been termed incurable. Mrs. J. W. Henderson, St. Johns, Wash., suffered for years with pains in the ovaries and uterine weakness, entirely cured by the Peebles treatment. Mrs. C. Harria, Marionville, Pa., cannot express too much gratitude for the results received through Dr. Peebles' treatment. She suffered for years with falling of the womb. Francis Wavering, Seattle, Wash., suffered for 20 years with a severe case of Catarrh; completely cured through the psychic treatment. Mrs. Mary A. Clair, Lexington, Ky., after 30 years' continual suffering from epilepsy, and trying to be cured by eminent physicians, says: "Two months of your treatment has made earth almost a heaven to me." Hundreds of testimonials like the above have been received. Dr. Peebles' psychic phenomena is the **GREATEST DISCOVERY OF THE AGE**. Send your name, address and leading symptoms to Dr. J. M. Peebles, Battle Creek, Mich.; you will receive, **ABSOLUTELY FREE** your case, also advice and the Doctor's different booklets, including "The Psychic Science in the Art of Healing," which should be read by all who prize **HEALTH AND HAPPINESS**.

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HOUSEHOLD

[CONTINUED-FROM PAGE 11]

TRUST

Let us leave it with him, all the doubts and the fears,
The sorrows and joys that encompass the years;
And leaving it there, since he knows what is best,
Let us rest, oh my heart, trusting him let us rest.

Know you not, oh my heart, that the darkest gloom
Hovering round us from troubles that never have come
When we trembled and shrank, by some terror oppress—
That came not? Then rest, oh my heart, let us rest!

We have traversed the heights where the angels have trod—
In the sunshine of peace, o'er the hills of our God;
We have camped in the lands lying low, and the chill
Of their noisomest vapors wrought us no ill.

Then why, oh my heart, do we falter and shrink?
If abysses are near there are no walls on the brink.

Do the roses of Sharon turn pale with affright?
Or the lilies go drooping for fear of the night?

Let us rest, oh my heart, on the arm that is strong;

He has kept us so safe, he has held us so long—

Let us leave it with him, in the dark or the light,

And leaving it there, 'twill be right, 'twill be right!

—Nellie Hart Woodworth.

NEW TOUCHES FOR OLD-TIME DISHES

SURELY every housewife who reads the FARM AND FIRESIDE must have learned before now how much better and more easily a kettle-roast of beef can be browned before it is boiled than by our mothers' method of simmering until tender, then evaporating the greater part of the liquor and browning the roast. Equally as beneficial touches have been given many other substantial old dishes without increasing the labor of preparing, and formulas for several are here given:

MEAT-PIE.—A delicious meat-pie, and one that is far more digestible than the ordinary sort, is made by removing the bones, skin and fat from beef or any other kind of cold meat and cutting the meat into cubes. Put one heaping tablespoonful of butter over the fire; when it melts add one teaspoonful of salt, a dusting of pepper and one heaping tablespoonful of flour; stir smooth, add one and one half cupfuls of white stock or the liquor in which the meat was boiled, and stir constantly until it boils to a smooth sauce. (If a slight flavoring of onion is relished, try a slice in the butter before adding the flour.) Put one quart of the prepared meat into a baking-dish, pour the boiling sauce over it, and place in the oven fifteen minutes. Make one pint of flour into a dough as for baking-powder biscuit, roll one half inch thick, cut into circles about one inch in diameter, arrange them over the top of the meat, and bake fifteen minutes longer. Serve hot in the dish in which it was baked.

POTTED MEAT.—This is a most attractive way of serving any left-over pieces of beef or other cold meat, and two or more kinds can be advantageously combined. Chop the meat very fine. For every two cupfuls of prepared meat allow three tablespoonfuls of butter; cream the latter with one half teaspoonful each of salt and mustard, a dash of pepper and two tablespoonfuls of lemon-juice, and then rub the meat to a paste in the flavored butter. Pack in tumblers that have been wet in cold water, pour over a little melted suet, and stand in a cold place. Serve cold cut in slices.

SCALLOPED BEEF.—Chop beef or other cold meat, and prepare an equal amount of bread-crumbs and strained canned tomatoes (flavored with onion or not, as preferred). Butter a baking-dish, fill with alternate layers of the three, commencing with meat and having buttered crumbs on top. Bake twenty minutes, and serve hot.

JELLIED BEEF.—Cover two pounds of round or other of the cheaper cuts of beef with boiling water, bring quickly to a boil, then draw back and simmer gently. One hour before it is done add one half dozen whole cloves, four one-inch long bits of cinnamon, one eighth of a teaspoonful of ground allspice, and the yellow rind of half a lemon. When the meat is done let it remain in the liquor until cold, then remove and chop very fine. Cover half a boxful of gelatin with cold water; when soft add two cupfuls of the liquor from the meat, and the white of one egg. Bring the mixture to a boil, boil five minutes, season with salt, pepper and the juice of one lemon, and let drip through a double cheese-cloth bag. Wet a mold in cold water, cover the bottom with the chopped yolks of hard-boiled eggs, sprinkle minced parsley over this, then fill with alternate layers of meat and jelly, having jelly on top. Let stand until the next day. Serve cold cut in slices.

KATHERINE B. JOHNSON.

WIDE SMYRNA LACE

Cast on 40 stitches.

First row—K 6, o, n, k 1, o, n, k 1, o, n, k 18, o, n, k 1, o, n, k 1, o, k 2.

Second row—K 12, o, n, k 1, o, n, k 1, o, n, k 21.

Third row—K 7, o, n, k 1, o, n, k 1, o, n, k 18, o, n, k 1, o, n, k 1, o, n, k 2.

Fourth row—K 14, o, n, k 1, o, n, k 1, o, n, k 20.

Fifth row—K 8, o, n, k 1, o, n, k 1, o, n, k 18, o, n, k 1, o, n, k 1, o, k 2.

Sixth row—K 16, o, n, k 1, o, n, k 1, o, n, k 19.

Seventh row—K 9, o, n, k 1, o, n, k 1, o, n, k 18, o, n, k 1, o, n, k 1, o, k 2.

Eighth row—K 18, o, n, k 1, o, n, k 1, o, n, k 18.

Ninth row—K 10, o, n, k 1, o, n, k 1, o, n, k 18, o, n, k 1, o, n, k 1, o, k 2.

Tenth row—K 20, o, n, k 1, o, n, k 1, o, n, k 17.

Eleventh row—Knit all plain 45 stitches.

Twelfth row—K 1, n, o, n, k 1, o, n, k 1, o, n, k 18, o, n, k 1, o, n, k 1, o, n, k 18.

Thirteenth row—K 19, o, n, k 1, o, n, k 1, o, n, k 17.

Fourteenth row—K 1, n, o, n, k 1, o, n, k 1, o, n, k 18, o, n, k 1, o, n, k 1, o, n, k 7.

Fifteenth row—K 20, o, n, k 1, o, n, k 1, o, n, k 13.

Sixteenth row—K 1, n, o, n, k 1, o, n, k 1, o, n, k 18, o, n, k 1, o, n, k 1, o, n, k 6.

Seventeenth row—K 21, o, n, k 1, o, n, k 1, o, n, k 13.

Eighteenth row—K 1, n, o, n, k 1, o, n, k 1, o, n, k 18, o, n, k 1, o, n, k 1, o, n, k 5.

Nineteenth row—K 22, o, n, k 1, o, n, k 1, o, n, k 11.

Twentieth row—K 1, n, o, n, k 1, o, n, k 1, o, n, k 18, o, n, k 1, o, n, k 1, o, n, k 4.

Twenty-first row—K 23, o, n, k 1, o, n, k 1, o, n, k 9.

Twenty-second row—Knit all plain; begin at first row. (See cut in the August 15th issue.) MRS. A. L. HOWELL.

ORIGIN OF A FAMILIAR PHRASE

"He will never set the river on fire" is often said of a dull, slothful person. The origin of the saying is this: In England many years ago each family was obliged to sift its own flour, before the millers had machinery for doing this. The sieve was called a temse, and was fixed to revolve on the top of a barrel. If turned too fast the friction sometimes caused it to take fire, and it was only smart, hard-working boys who made it go fast enough for this, so people got into the way of saying of a lazy boy, "He will never set the temse on fire." The sieves went out of date, but lazy boys never go out of fashion, so people continued to use the expression; and as the river Thames is pronounced in the same way, after many years people who had never heard of a temse thought it meant setting the river Thames on fire. The expression traveled far and wide, and people living near other streams did not know why it was harder for a slothful boy to set the Thames on fire than any other river, so they changed the saying to "setting the river on fire."

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EDITOR'S NOTE.—The Slocum System is medicine reduced to an exact science by America's foremost specialist, and our readers are urged to take advantage of Dr. Slocum's generous offer. When writing the Doctor please mention Farm and Fireside.

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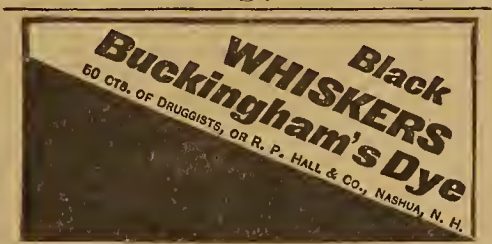
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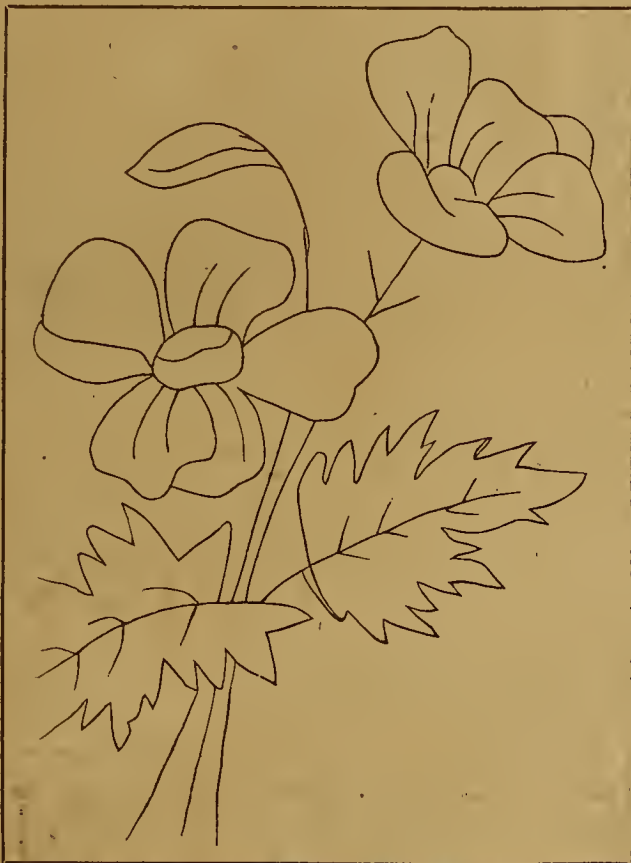
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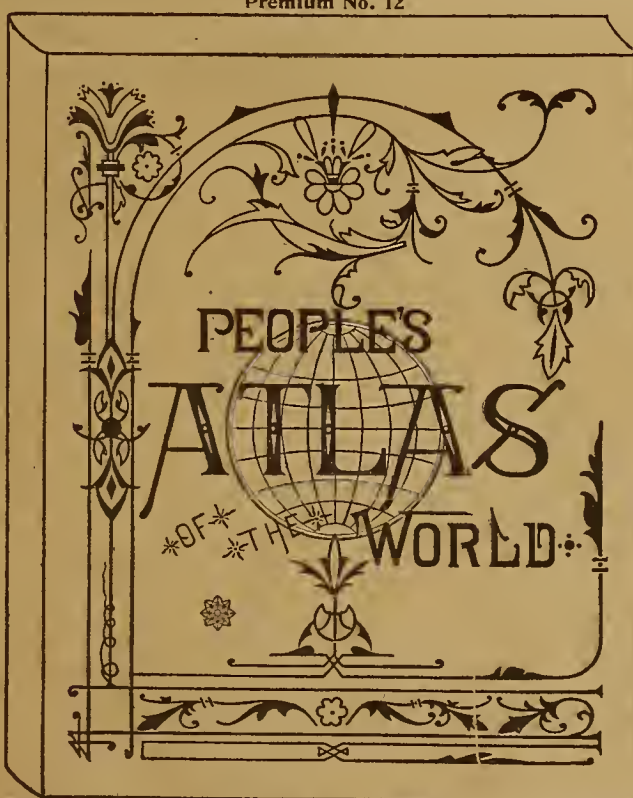
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FARM SELECTIONS

A VALUABLE OUNCE

THINKING of our Indiana farmer growing clover once in three years to improve his farm brings to mind an article in the "Rural New-Yorker." It seems to me my friend C. E. Chapman has got a little off. He says: "The value of clover is not in the bacteria grown on its roots, but in the humus furnished by the mass of roots; by its loosening and mellowing capacity."

He says further that clover makes his soil mellow, it holds moisture better, weeds are smothered by the heavy growth, and then he refers to the size of these bacteria (like little seeds on the roots), as compared to the other plants, "perhaps an ounce of bacteria to the ton of clover." The mellowing effect of clover is valuable, and so is the humus it furnishes; and it does smother weeds.

These things are all true; but when our friend says the value of the clover is not also in the bacteria grown on the roots of it, and speaks of them slightly as only about an ounce as compared with a ton of clover, he certainly is wrong. I think a ton of clover will usually have more than an ounce of these bacterial homes in the roots, but it doesn't matter. Call it one ounce. Now, Dr. Van Slyke, of New York, says that in each one of these little tubercles there is a manufactory with an army of microscopic workers, and they are transforming the atmospheric nitrogen into nitric acid, which may be absorbed by the clover to make its growth. What matter if they don't weigh more than an ounce if they can change thirty or forty pounds of nitrogen out of the air into the ton of clover hay on the roots of which they grew?

The farmers of New York paid on the average about twenty cents a pound for nitrogen in their fertilizers last year. These little bacteria, if weighing but an ounce, seem many times more valuable than their weight would indicate when we realize that they can save us six or eight dollars. It isn't the weight of them that determines their value, but what they can do or what they are worth. An ounce of gold is worth more than a ton of clover. The bacteria on the roots of clover have put millions of ounces of gold into the pockets of farmers; and then they have had the clover, with all its other benefits besides. —T. B. Terry, in Practical Farmer.

TURKESTAN ALFALFA

The reports from the region west of the Mississippi river and north of Kansas and California indicate that this variety is hardier and more productive than that commonly grown in this region. It seems to endure drought better, is not so easily affected by freezing, and gives better results on strongly alkaline soils. In the East, however, where there is a heavy rainfall, and where heavy soils predominate, this variety seems to be little, if any, superior to the French or Chilean varieties; in fact, it seems certain that in some localities at least it is less valuable. In the South so few tests have been made that no definite conclusions can be drawn, the reports from some sections being favorable to the Turkestan alfalfa, while those from others indicate that the commonly grown varieties are the most valuable. In the extreme Southwest further experimentation is needed.

The seed of Turkestan alfalfa will germinate much quicker and the plants start into growth earlier under the same conditions than common alfalfa. The plants are more leafy, grow more rapidly, and have a stronger, more vigorous root system. Another advantage which the Turkestan variety has is that the stems are more slender and less woody, the plants making a more nutritious hay of finer quality. That it will withstand drought under the same conditions better than ordinary alfalfa seems certain from the reports of the experimenters. In the West and the Northwest, at least, it seems to be more productive, both with and without irrigation. —From Bulletin of United States Department of Agriculture.

STOMACH-WORMS OF SHEEP

Lambs infested with the worm at the Ohio Experiment Station were allowed to go without treatment for two months, at which stage the gasoline treatment was commenced. At this time but few of the flock were healthy-looking, and some of them were quite thin in flesh. There was every indication that from one third to one half of the flock would succumb to the disease. The gasoline seemed to check the trouble at once, as there was not a single death after beginning the use of it. The treatment consisted in simply giving gasoline in flaxseed-tea in the form of a drench.

To describe more accurately: About one gallon of flaxseed contained in a cheese-cloth sack securely tied was placed over the fire in a kettle containing at least two gallons of soft water, and allowed to steep for from one to two hours. The sack was then removed and allowed to drain into the kettle while the tea was cooling. When the temperature was reduced to about that of freshly drawn milk four ounces of the tea were measured out into a bottle, and in it was mixed one ordinary tablespoonful of common gasoline for each lamb, weighing from sixty to eighty pounds. Then placing the thumb over the mouth of the bottle it was shaken vigorously for at least a minute, after which it was poured quickly into a small-sized drenching-bottle and at once given to the lamb. In giving this drench special care is necessary not to strangle the lamb. The animal should be set upon its rump and held between the knees, using care not to throw the head much farther back than the line of the back of the sheep.

The gasoline may be given as successfully in new milk as in flaxseed-tea, and should be administered to the lambs after they have been fasted for at least twelve hours. After the administration of the medicine the sheep should not be allowed to eat or drink for at least two hours. This treatment should be given on three consecutive days, and should then be repeated in from seven to ten days for three consecutive days. —The Shepherd's Bulletin.

CAUSE AND REMEDY FOR SLIMY MILK

One of the most common and puzzling difficulties experienced by milkmen is the development of sliminess in the milk, which prevents cream from rising and otherwise injures the quality. Bacteria, which cause these changes, are not very common and will not usually appear in clean and well-regulated dairies. Sometimes this trouble comes from the dust of a special lot of hay which the farmer is using, sometimes from the water used in washing the cans, or possibly from bacteria that get attached to the cow's body in the pastures or swamps.

Often the pest is spread from one farm to all the others in the community through exchanging cans at the creamery or on the milk-routes. In such a case the remedy is a complete sterilization by superheated steam of all cans that are used for distributing milk, followed by a washing of the cows' stalls in dairies where the trouble has appeared. Other kinds of bacteria cause such troubles as tainted milk, blue milk, red milk and soapy milk. The remedy in all such cases must be to look for some unusual cause and remove it, following with disinfection of the stable and thorough cleansing of the cow. —Professor W. H. Conn, in American Agriculturist.

PARIS STREET-TREES

Wide streets and handsome street-trees help largely in the fame of beautiful Paris. But the success of the trees is due to intelligent oversight by the authorities. Even with this admirable protection the average life of a Paris street-tree is found to be but half that of those growing in the environs. Of varieties the following have been found best suited to the conditions of Paris, preference being given in the order named: Horse-chestnut (which is much the best), plane, ailantus, locust, linden and paulownia. —Meehan's Monthly.

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REFORESTATION IN COLORADO

By H. A. Crafts

THE plains of Colorado in their original state were practically treeless, but in the mountain regions were some magnificent forests, and in spite of the carelessness and the cupidity of man there still remain some quite extensive tracts of fine timber. But with the devastating effects of annual forest fires and the continued work of the timber-cutters and tie-choppers these are rapidly disappearing. The forest fires are especially destructive. Not a summer season passes but that somewhere up and down the range they rage with unchecked fury, and do not cease to burn until extinguished by autumnal rains. By day vast volumes of smoke rise above the crest of the range, throwing a veil over the sun's face, which for days at a time peers from the heavens like an immense copper disk; and by night the fires from the burning timber gleam along the mountain-sides like the watch-fires of a sleeping army. They are usually started from unextinguished camp-fires, a match carelessly thrown into the dry and tinder-like scurf, or the embers knocked from the pipe-bowl of some wandering tourist or prospector; sometimes they are kindled by a lightning-stroke during some of the heavy thunder-storms that prevail each summer in the Rocky mountain regions. But once started they are soon beyond human power to extinguish. Fuel is not lacking for the greedy flames to devour, and the winds that prevail almost constantly in these regions soon fan the flames into a fire, and the fire into a conflagration. The Rocky mountain pine is particularly rich in resinous substances, which only add to the strength of the flames. Then in the heavy forests of the timber belts the ground is generally very thickly covered with scurf, underbrush and dead timber, so that when a fire once gains a hold it



AMONG THE PINES IN A ROCKY MOUNTAIN TIMBER BELT

burns fiercely and with increasing fury. It eats down into the dry masses of decayed material that covers the earth, crawls along dead trunks and gnaws out their decayed hearts; mounts up even into the tops of living trees, whose interlocking branches pass the consuming elements from tree to tree like human hands passing blazing torches in a

crowd of mad incendiaries. Slowly but irresistibly the roaring, crackling enemy sweeps through the forests of tall and stately pines, leaving nothing in its wake but blackened earth and charred trunks. Thousands of acres of the finest timber-lands are thus devastated each year, and it seems a wonder that the entire forest growth has not been destroyed long before this.

The destruction is not all confined to the larger forests. Fine bodies of saplings making a brave fight for existence against the disadvantages of a sterile soil and an uncongenial climate are often swept away and the ground whereon they stood left with no vestige of green things. Laws are passed and regulations are made, from the national government down, with a view to checking this destruction, but they have been in a large measure ineffectual. Many of the forests are so extensive and far remote from the centers of population that it is extremely difficult to enforce remedial measures. Nevertheless the national government is taking steps to preserve the remaining forests and possibly to devise means of restoring those that have been destroyed. For doubly important to the welfare of the state is the preservation of these forests, and chiefly important is their relation to the subject of irrigation, which is the basic element of all agricultural pursuits within the state. It is the great forests that receive and hold in reserve the heavy snowfall of the higher altitudes. So thick is the shade of some sections that the sun's rays do not at any time of the day reach the deep beds of snow that lie beneath, and there are deposits of snow and ice that do not even melt from year to year. But as midsummer approaches sufficient warmth penetrates these deep shades to slowly melt the snow and supply mountain streams with a steady flow of water. Otherwise the snows would be quickly dissipated by the hot sunshine and warm winds, and the reserve moisture would rush toward the plains in uncontrollable floods and be lost to the farmer. Then comes the need of a timber supply for an immense contiguous territory that is practically treeless.

[CONCLUDED ON PAGE 6 OF THIS ISSUE]



WORK OF A FOREST FIRE IN THE ROCKY MOUNTAINS

FARM AND FIRESIDE

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IN A recent sermon Rev. J. C. Hartzell, Bishop of the Methodist Episcopal church in Africa, predicted a bright future for the Dark Continent.

"Africa," he said, "is to be the chief home of the black races in the future, and those races are to have their chance as to civilization and government under the direction of white nations. During several thousand years the native races of Africa have not written a book, painted a picture nor designed an architectural building, but they have lived, and, in spite of wars and barbaric customs, they have maintained many excellent qualities, have good physiques and are capable of great development."

"The Briton-Boer war is the most important incident in the redemption of Africa since Livingstone first crossed the continent and startled the world with its possibilities. English rule in South Africa means equal justice for all white men, irrespective of race or religion; it also means fair dealing with the black races and civil and religious liberty for the natives in proportion as they can be prepared to accept and enjoy it."

"The partition of the African continent under the nations of Europe is a pivotal event in the history not only of the black races in Africa, but of the black races of the world. England, France and Germany will control the destinies of the African continent. Chief among these is England, who, up to date, is the greatest colonizing nation of the world. Germany and France have large possessions, and are greatly improving their colonizing methods."

"The commerce of Africa is having a phenomenal development. Fifty years ago there was not a single steamship on either coast; now there are more than three hundred, floating the flags of England, Germany, France, Spain, Portugal or Belgium. The United States sold \$13,000,000 of American products in South Africa last year. South Africa is larger than all the United States east

of the Mississippi river. It now has 900,000 Europeans, mostly Dutch and English, and this number will multiply in the near future. It is the richest gold country in the world, and there is in sight within the vicinity of Johannesburg alone more gold now than there is in circulation on the globe—namely, \$4,000,000,000.

"Africa is a continent of contrasts. Up to date it has been 'Westward the star of empire takes its course,' but in Africa, when the Briton and the Boer are united and prosperous in all South Africa, as they are now in Cape Colony and Natal, northward the star of empire will take its course, and the shades of barbarism and of Mohammedanism in central and north Africa will pass away."

REVIEWING the world's wheat crop the Cincinnati "Price Current" says:

"Beerbohm's London 'List' has submitted estimates of the world's wheat production for the current year, with comparisons for five years previous. These estimates, converted into bushels, show the following comparisons for Europe and all other production:

	EUROPE	OUT OF EUROPE	TOTAL, BUSHELS
1900.....	1,396,800,000	1,076,000,000	2,472,800,000
1899.....	1,474,800,000	1,178,000,000	2,652,800,000
1898.....	1,541,200,000	1,322,400,000	2,863,600,000
1897.....	1,208,400,000	1,054,400,000	2,262,800,000
1896.....	1,534,200,000	888,400,000	2,422,600,000
1895.....	1,492,000,000	1,012,400,000	2,504,400,000

"For the five years prior to 1900 the annual average was 1,450,100,000 for Europe, 1,091,100,000 for all other, and 2,541,200,000 bushels for total production. Compared with these quantities the indication for 1900 implies a decrease of 53,300,000 for Europe, 15,100,000 for other countries, making a total of 68,400,000 bushels, or less than three per cent, which would not be a wide variation were all these quantities precise as representing actual conditions. This apparent deficiency is more than balanced by available surplus brought over from the preceding crop year. And it may be further observed that it is easily possible that final records may fully overcome the suggested deficiency in this comparison."

WHILE we are reaching out after the islands of the seas and annexing new insular territory," says the Chicago "Times-Herald," "it is well to be occasionally reminded of the vast resources of the territory lying immediately within our national domain which is practically undeveloped and not yet thickly populated."

"In our exultations over the fertile acres of Hawaii and the rich productiveness of Porto Rico we have almost forgotten Oklahoma. 'To go to Oklahoma during the five years succeeding the run,' says Helen Churchill Candee, in the September 'Atlantic,' 'was to invite suspicion as to motives.' Those who entered the territory in those days were looked at speculatively but silently by fellow-travelers."

"But now it is different. If you are going to Oklahoma now you will be regarded with envy and interest. You will probably be classed as a rich farmer or stock-raiser. Prairies in Oklahoma are a thing of the past, except in the western grazing districts and the long Cherokee strip which caps the Texas panhandle. These prairies were long since metamorphosed into profitable wheat-fields. The rough tales of the early days that followed the run when men quarreled over claims are also things of the past. The territory is now a garden of quarter-sections, each farm containing a farm-house of modern pattern, large barns for storing grain and hay and sheltering cattle, and enough windmills to shadow Holland. In ten years the people of Oklahoma, who started with nothing, showed \$43,000,000 of taxable property. This, of course, did not represent the full cash value of the property."

"Five million dollars was received for the cotton crop of Oklahoma in 1898, some of the cotton going to Liverpool

and Japan. Large mills have been erected for making oil from the cotton-seeds of these great crops. There is no need to go to Europe for cheap living while Oklahoma exists. All home-grown foods of a perishable nature can be had for astonishingly low prices. The finest watermelons and muskmelons raised in the world may be purchased at any time from July to cold weather for five cents each. Spring chickens are twenty-five cents a pair; beef and lamb, fifteen cents a pound; grapes of the most luscious varieties are nearly given away—one cent a pound for the best. Fruits of all kinds that rival the California fruit in flavor and size are abundant and cheap."

IN AN article on China and Russia in the October "North American Review" the Hon. Josiah Quincy says:

"The interests of Russia in China and her relations to the Celestial Empire are entirely different from those of any other power; her position is already stronger than that of any of her rivals in the Far East, and may soon become impregnable, and if she can avoid war she may almost be said to hold the future of China in the hollow of her hand—though the process of asserting her full control is likely to be a long and gradual one. In short, Russia holds the winning cards in her hand, and knows how to play them."

"The simple fact that Russia has a frontier co-terminus with that of China for some four thousand miles requires that her policy toward the Empire should be based on very different considerations from those which the other nations need take into account. No other power represented in the concert is a territorial neighbor of China, except through distant dependencies—France through Tong-king, and Great Britain through Burma; and of these two frontiers that of France, the ally of Russia, is by far the most important. Russia is uniting her empire with China by railroads; the other powers must always be dependent upon communications by sea. Japan, indeed, is a near neighbor of China; but the fact that she is separated from the Celestial Empire by water makes her necessary relations to the problem differ as much from those of Russia as the situation of England with reference to France is distinguished from that of Germany. The difference between sea and land relations of offense and defense between nations is fundamental. With Russia the security of a frontier of enormous extent must be a primary consideration, and recent events prove that its liability to attack is by no means merely a theoretical one. The last thing that she desires, or can afford, is to have to maintain this frontier in a perpetual state of defense against possible attacks. For this reason alone, if for no other, the maintenance of friendly relations with China must be a cardinal point in her policy in Asia."

"China cannot strike other nations except through their interests on her coasts or within her borders; she can strike Russia within the Empire of the Czar, and it is at least conceivable and possible, even if quite unlikely, that she might some day organize out of her teeming population armies which would repeat the Tartar invasion. Russia has not yet forgotten that these fierce Asiatics ruled her people for over two centuries, and the overthrow of their domination is of as recent date as the discovery of America. While all the conditions of warfare have changed since Genghis Kahn started the career of Asiatic conquest to the westward, the marvelous history of Japanese development within a single generation proves that, under some circumstances, Orientals can assimilate the material side of Western civilization, including its methods of fighting, with extraordinary rapidity and success."

"Russia is forced by her situation to consider more seriously than any other power the immense possibilities of danger involved in crowding too hard a nation of some four hundred millions of people, constituting the most ancient

empire in existence, and united by a spirit of opposition to foreigners."

"Russia, therefore, vulnerable by land, must take a deep interest in the Chinese question as a measure of self-defense; to her it is no mere matter of commerce or exploitation in remote regions, but of national security itself. If China is helpless, Russia cannot safely allow any other power to take advantage of that helplessness to build up a controlling influence upon the ruins of the Celestial Empire; even if China is not helpless, and may even become powerful, Russia must maintain such relations with her as may best safeguard the interests of her own great empire. If China is for the Chinese, Russia must be her next friend; if not, then her protector."

UNDER date of September 20th the "Ohio Farmer" concludes an interesting editorial on the Ohio Experiment Station as follows:

"The Ohio Experiment Station is a grand institution. It has just got ready for its most effective work in behalf of farmers of the state. The director and his staff have been with it for a decade of years and over. They have carried on experiments along practical lines, and with rare judgment have chosen those that would benefit the ordinary hard-working farmer most. They have fully demonstrated their capacity, their earnestness of purpose, their energy and zeal in this work, and have secured the confidence and respect of the farmers of the state. Every one who knows Director Thorne admits that he is honest, earnest, capable and candid; that he thoroughly understands the condition of Ohio agriculture and what problems Ohio farmers are most interested in solving. He has been at the head of the station, practically, ever since its establishment, and no one has ever called in question his character, integrity and ability. Prof. Green, in the horticultural department, has been with the station from its inception, and stands to-day among the best authorities this country affords. Prof. Hickman, as agriculturist, has no superior among all the experiment stations in the Union. He has been there some thirteen years. Prof. Webster, as entomologist, is among the younger members of the staff, but his ability in that line is unquestioned. Prof. Selby, as botanist and chemist, is gaining respect and confidence every year."

"It must be kept in mind that the value of experimental work, especially in field, orchard and stable, depends largely upon its continuity—its continuance under the same guiding hands, free from interruption and interference, with the same object in view and with a clear and firm grasp upon preceding work and results. Correct comparisons and reliable conclusions cannot otherwise be made. Ohio has been fortunate in this respect. Director Thorne, Horticulturist Green and Agriculturist Hickman, the three men most closely connected with the continuous work of the station, have been secure in their positions and heartily supported and encouraged by boards of control that thoroughly appreciated the nature of their work and the importance of its continuity."

These statements are most heartily indorsed by FARM AND FIRESIDE. Thirteen years ago, when Director Thorne took charge, the station owned a \$1,000-barn standing on leased ground, and apparatus, books, etc., worth about \$4,000; and it had no income except that from the national government. Now it owns a farm of over four hundred and fifty acres equipped with new station buildings worth \$150,000 or more, and live stock, apparatus, etc., worth nearly \$25,000. In addition to the fixed income from the national government it now receives from the state annual appropriations of \$10,000 to \$15,000. During all this period of growth and preparation the regular station work of experiment and research has been most successfully carried on along practical lines for the real good of agriculture. Faithful service deserves great credit for the past and encouragement for the future."



Profits in Ginseng

The editor of a New York agricultural paper states it as a fact that he recently picked in a few minutes before breakfast over five hundred dollars' worth of berries in a small basket. The "berries" were seeds of ginseng. He had heard so much about this crop that he went to Mr. Stanton's place to see it. He adds: "Great stories are being told about the profits in ginseng culture. A note of warning is needed." Such a note of warning has been given by my friend Prof. John A. Craig, formerly of the Ottawa Experimental Farm, now of the Iowa Agricultural College, and as it touches the very nerve of the matter I may be permitted to quote from it ("Iowa State Register") as follows:

"Mrs. G. W. M., of Iowa, sends a pamphlet advertising the money-making possibilities of ginseng culture. The catalogue is certainly most engagingly gotten up; it will be noticed, however, that in the large number of testimonials submitted, while they show a great many people interested in the industry, they give few, if any, figures covering actual returns from sales of roots. This is probably the weakest side of the catalogue. Most of those who contribute items of experience are beginners, and state in a general way, that they have been successful so far; but one fails to find evidence which shows that in any case the experiment has been carried to that stage when one can say that commercial success has been attained. The catalogue is an excellent illustration of the 'count your chickens before they are hatched' system of calculation, and estimating a crop which is as yet untried and is still in the experimental stage makes it all the more uncertain. It is most elaborate, and it may be said to be absolutely fascinating in the tempting money-making possibilities which it presents.

* * *

"Ginseng has been tried in many places in this country covering a period of fifteen or twenty years. So far as I am aware there are very few men or organizations who have made a commercial success of growing it. It is a plant which requires a considerable amount of moisture, and must have a certain amount of shade; in selecting a place for a bed one must either provide shade or choose a naturally shady location. The prices quoted in this catalogue (five to seven dollars) seem to me to be considerably higher than those usually obtained in the market. My impression is that three to five dollars a pound for the dried roots will cover the variation in price. I think that it very seldom goes as high as seven dollars; but if it is sold at seven dollars to the consumer it must be remembered that it will pass through the hands of several parties before it reaches the final purchaser, and the profits of these intermediates must be reckoned. To any one who is interested in the work, and has a suitable location, I would say, try it on a small scale; but I would suggest that it would be wise not to set the hopes too high, nor to count on being a millionaire in ten or fifteen years with an initial expenditure of one thousand dollars, as stated in the prospectus."

* * *

I have right along held the same view of the ginseng situation as here expressed by friend Craig. As long as a considerable number of persons are attracted by the glowing promises of people interested in booming the new industry, and can be induced to pay good prices for ginseng seed and roots, the production of these articles may be made to pay big profits. But this is more a seedsman's or nursery business than "ginseng culture." The great profits promised by Belgian-hare fanciers are based more largely on the sale of fancy breeding stock than on the regular business of growing these animals for ordinary commercial purposes. Undoubtedly there are some (perhaps many) who will be able to

engage in the business of growing the commercial ginseng-root with moderate profits, as some of us have learned to grow the Belgian hare with moderate profits as meat stock.

* * *

More Light on the Belgian-hare Business

Mr. Root, in "Gleanings," reports a conversation he had recently with Rev. E. T. Abbott. This noted apiculturist hit the nail so squarely on the head that I must quote him in full. Said Mr. Abbott:

"I keep Belgian hares, and I keep them for sale; but I want to say to you that many extravagant statements are now being made concerning them that the facts will not warrant. There are bound to be many disappointed investors in this pursuit. It is stated, among other things, that they are almost free from disease, that they are very cleanly, and all that. The truth is, they are just as subject to disease as any stock; and if their hutches are not cleaned daily they will become positively nasty. One chap who called on me was very anxious to go into the business; but when he saw me clean out one of the hutches one morning he concluded he didn't want any Belgian hares, and I haven't seen anything of him since. I tell you, when the selling of fancy stock at big prices is over, and there are no more suckers to buy at big prices, the fad will seek its level, like every other good business. The growing of hares is all right. There is money in it if properly managed. The meat is good, and the animals are enormously prolific, but the dear public should know the facts; and one of these facts is that the hares have a way of getting sick and dying before anything can be done. I am willing to indorse every word of this, but wish to add that an easy way to keep the hutches, or pens, clean is by covering the floor six or eight inches deep with reasonably dry muck or loamy soil."

* * *

Standard Chemical Fertilizers

The old questions will not down. E. G. B., a reader in Guilford, Maine, writes that he reads so much about nitrate of soda and muriate of potash as fertilizers that he desires to learn still more about them. He asks: "To secure good results, how many pounds of each should be used to an acre for corn, potatoes, root crops, etc.? Should phosphate be used with them, and if so, in what proportion? Should they be used in the hill or drill, or applied as a top dressing after the plants are up, or both? What is the usual price a pound for each, and where can these chemicals be obtained?" This inquirer further says that he would prefer to have me give him a private reply to all these queries. The way I got out of this was by sending him a copy of my "Practical Farm Chemistry." If any one has no knowledge of the elementary principles of agricultural chemistry, no idea of the composition of earthly substances, he will have to do some studying and thinking before he can hope to get even a fair understanding of these questions. A private letter, even if lengthy, would not do the matter justice. I believe there are a number of good books in existence and may be had through the regular book trade—books which are good and serviceable. If you cannot give to these questions more thought, more study than that taken up by reading a personal reply to a few inquiries you will not be in the position to use standard chemicals with understanding, or even to purchase chemical fertilizers of any kind with any degree of assurance that you get your money's worth. Nitrate of soda, for instance, often does wonders in the hands of the man who knows its proper use. I would not recommend it to others. Less discrimination may be required in the use of muriate of potash and phosphatic manures. These minerals when applied to a particular soil scantily supplied with them will remain, and cannot help but

do some good sooner or later. But the only reasonable way for a person not fully posted (and probably for those who are, too) is to rely on clover rotation or the use of other leguminous crops, such as cow-peas, crimson clover, soy-beans, etc., for drawing nitrogen from the air and filling the soil with humus; while the minerals can be applied by putting muriate of potash and superphosphates (dissolved phosphate rock) into the soil in time for the clover to make a good growth. Then when the sod is turned under and has sufficiently decayed the soil will be well supplied with available plant-foods and be in the best condition to grow good crops of corn, potatoes, grains, etc.

* * *

How many pounds of each to use on an acre for any of these crops of course depends largely on what the soil contains already. Some soils have plenty of potash, and only need the application of phosphoric acid in the form mentioned, or in some other, according to chances of purchase. Some soils need potash more than phosphoric acid. In a general way I would use more potash on sandy soils than on clay loams, and more phosphates on soils that have long been used for the production of grain crops than on those on which a regular crop rotation, with clover and occasional manuring, has been practised. Heavy crops of corn require large quantities of plant-food; large crops of potatoes use up especially large amounts of potash. For corn you may, on ordinary soils, safely use one hundred and fifty to two hundred pounds of muriate of potash, and three hundred to four hundred pounds of acidulated rock. For potatoes, in many instances, less superphosphates would do, but I would try to apply the muriate in the fall previous—that is, if there were no applications made to the clover crop preceding the potato crop. The New York experimental station at Geneva publishes a list of dealers who are ready to sell standard agricultural chemicals. Send for a copy, and then ask those nearest to you to quote prices. Nitrate of soda usually sells in small quantities at two and one half cents a pound; muriate of potash at two and one fourth cents to two and one half cents. T. GREINER.

2

SALIENT FARM NOTES

Belgian-hare Fad Not long ago I said something about Belgian hares. Since that time no less than three dozen circulars from as many breeders of these animals have come to me through the mails. I am informed by competent authority that the country is flooded with them, and that thousands of people are parting with hard-earned dollars in the hope of harvesting one of the fortunes said to be awaiting all who are "wise" enough to go into the hare-breeding business. To show what alluring statements and Munchausen tales the "boomers" of this fad are sending out, I quote from one of their circulars just received:

"The hares are now selling at from five dollars to six hundred dollars apiece. Standard stock find ready market at prices that seem enormous. For delicious flavor the Belgian hare excels all other animal meat, and is superior to any kind of fowl. They are easily raised at a cost not to exceed ten cents each, and often weigh twelve pounds at the age of six months. From fifty to one hundred can be kept in any little outhouse or back yard. They are fed principally on dry hay and grain, but will eat anything that sheep will. They are marvelously prolific, produce young every sixty days, and eight to twelve at a time. Belgian-hare culture compared with that of poultry is far more profitable. They are easier raised, require smaller runs, have no vermin and are not subject to disease."

* * *

Some one has sent me a copy of the San Diegoan "Sun" of September 4, 1900, a paper published at San Diego, Cal., and from it I copy the following:

"Belgian hares, their haunts and habits, was the chief subject of discussion before the board of supervisors this morning, and some startling stories were told concerning the marvelous fecundity of the rabbits and their destructive qualities where gardens and

orchards are concerned. The Belgian-hare fad struck southern California about a year ago, Los Angeles, as usual, being the chief storm center. Six months ago the furor was at its height, fancy imported hares being bought and sold in Los Angeles and Pasadena for as high as fifteen hundred dollars each. Soon whole avenues were lined with signs announcing Belgian hares for sale at prices from ten dollars up. Then it dawned on the rabbit fanciers that Belgian hares were great multipliers and that the market for rabbit meat was not unlimited. Then came the crash of a bursted boom, and the whole hare business fell to the ground with a dull, sickening thud. Now you can buy Belgian hares in Los Angeles for any old price, and if you don't want to pay anything you can have the hares for nothing. It is the same here in San Diego. Already many breeders are preparing to turn their rabbits loose on the country, as they cannot sell them at any price, and the fear has become general that if this is done the country will be literally overrun within five years. Supervisor Griffin reported that one woman near Encinitas has three hundred which she intends to liberate, and several other examples were given. It appears that the favorite food of the Belgian hare is the tender bark of young fruit-trees, and if the hares are not exterminated the fruit-trees will be. The supervisors therefore passed an ordinance compelling all owners of Belgian hares to keep the animals strictly confined, fixing the penalty for turning them loose at not less than twenty dollars nor more than one hundred dollars."

* * *

And that's where the Belgian-hare fad has got to in California, and that is where it will soon get to all over the country, except, probably, in the extreme North. I have opposed this fad all along because I consider the Belgian hare the equal in fecundity of the English sparrow, and likely to become a thousand times more destructive to fruit, vegetables and grain if turned loose on the country, as it is certain to be when the fad expires. In the southern part of Illinois I have seen large orchards of apple-trees stripped of bark to a height of two feet by our common rabbit. And the damage was all done in two nights. Wherever the common rabbit abounds every orchardist is obliged to provide protection of some sort for his trees.

* * *

Standard Ear Seed-corn

There is a large crop of corn in the principal corn-producing states, and the quality is extra good. I have seen many fields of thirty to over one hundred acres that will yield sixty to eighty bushels to the acre. I have noticed that when the corn crop is extra good thousands of farmers become careless about selecting and saving seed. There is so much that is first-class that they seem to think it unnecessary to give any of it special care. I would advise farmers to be just as careful in selecting and thoroughly curing seed this year as they would be if the crop was poor and late in ripening. The crop of another year depends largely on good, sound seed, and it would seem that no farmer would neglect so important a matter; yet thousands of them will do it. In selecting seed-ears, don't pick out the largest, but aim to select standard size and shape. In the "central corn belt" a standard ear is ten inches in length, seven and one half inches in circumference, and should yield ninety per cent of grain. It should be even its entire length and be well filled out at both ends. It has been found that corn of this description gives the best yield to the acre, and is the most reliable in a term of years. One farmer of my acquaintance objected to the "standard" ear, on the ground that it is not large enough. "I sell my corn on the ear," said he, "and I want a big ear and a big cob because they weigh. I get more money from an acre of big-eared corn than from one of 'standard' corn. The weight is what I want, and it is immaterial to me whether that weight is in the grain or cob, so I get it." That is a tenant-farmer's idea, but I think he is wrong.

FRED GRUNDY.

OUR FARM

FARM THEORY AND PRACTICE

HIGH-PRICED FEED.—This season promises to be one of high-priced feeding stuffs. Hay was a short crop in this country, and straw will be high. While we have a good crop of corn, it is not excessively large, and the usual reserves have been used up very close. Exports tend to increase, and the feeding demand at home will again be large. There is reason to believe that the price of corn will rule fairly high all season. Such conditions should lead to better care of corn stover than has been given by many in the past. The amount of stover from an acre of land varies so much with variety and latitude that figures are not satisfactory; but in what may be called the center of the corn belt we may count upon one and one half tons of stover from an acre of fairly good corn. Two thirds of that, or one ton, will be eaten by stock with relish, and experiments by scientific men show that the part eaten is just about as digestible and nutritious as an equal weight of timothy hay. That is to say, we should place about the same value upon the stover of an acre of land as we do upon a ton of hay if wanted for feed. This is in accord not only with the experiments of scientists, but also with the experience of thousands of practical farmers. For horses at hard labor the stover is inferior, but for idle horses and for cows it is superior. Viewing the matter as it is, no stover needed for feed should be left to weather in the field until midwinter. There are better ways within the reach of every one.

CARING FOR STOVER.—The shredder puts stover into good condition for feeding; but all farmers are not within reach of shredders, and some do not have sufficient barn-room for storage. In any event put into the dry all the feed possible. If shredding is out of the question, then have the corn husked out by hand as soon as possible, tying the stover into bundles of convenient size. Having mowed away all that is possible, the remainder should be drawn from the field and stacked or shocked on dry land near the barn. When husking, if rain threatens, it is better to draw in the stover first, leaving the grain on the ground. A rain will not injure the grain much, but it will injure the stover. Set it in shocks of twenty-five bundles, and with a rope draw the butt of the shock close together and tie with binder-twine. Then draw the top close and tie again. The twine can be saved for use in the future when the stover goes into the barn ready for feeding. In this way, protected from the wind and firmly bound, the feed can be saved without serious loss. If it has been cut at the right time and has been kept bright it is relished by stock throughout the winter. Drawing and shocking cost little in comparison with the feeding value, and the work should be done with the same energy as is given to the saving of hay when it is ready for the mow or stack.

SAVING SEED-POTATOES.—South of the latitude of Columbus, Ohio, it usually pays to get Northern-grown potatoes for planting, unless one is so far south that a second crop can be grown for seed. The potato grown in a cool latitude has more vitality than one grown in excessive heat. Early blight reduces vitality, and as diseases multiply the safest seed stock comes from points as far north as Michigan. Potatoes are a rather costly crop, and many do not like to add to the necessary expense by buying seed from a distance; but experience shows that the investment pays. As to varieties, select ones as much resistant to blight as possible. There are no blight-proof varieties, but some do not succumb nearly so quickly as others. Taken all in all for various soils probably no grander variety has been introduced since the days of the Early Rose and Peerless than the Carman No. 3. It is a good, reliable yielder and has few small tubers. The table quality is not the best, but it is

seemingly impossible to combine the highest eating quality and the greatest productiveness.

SETTING SHADE-TREES.—I may say too much on the point of care of the grounds about the home, having mentioned this matter several times in these columns; but farmers continue to neglect the setting of shade-trees in so many cases that insistence may be a virtue. We have had a very hot summer, and city folks rushed to summer resorts by the tens of thousands. Farmers' wives as a rule remained at home from necessity. There was work that could not be neglected, and oftentimes money was not plentiful. Was the work done in a home that was made reasonably cool by the presence of a few shade-trees that kept the direct rays of the sun off the house a portion of the day? There must be sunshine for the sake of health, but for personal comfort the air about a home should be cooled by some good shade. There are too many—far too many—farm homes without any decent shade. Set some trees, not oddities from a distance that may not grow, but good, honest forest varieties. They cost nothing and are sure to grow. After them come the purely ornamental trees and shrubs. Every farmer may have a neat lawn and pleasant shade, and these help to make a very plain house attractive.

OUR EXPERIMENT STATIONS.—There is a great difference in the value of the various state stations to the farmers. Some are doing exceedingly good work, rendering a service to agriculture that is highly appreciated by the farmers, and of this number is the Ohio station at Wooster. Director Thorne not only has given high standing to the station by means of the character of the work performed under his direction by a competent staff of workers, but he has compelled the confidence of the mass of farmers by his conscientious and conservative course. Ohio farmers have ceased to distrust experiment-station work, and this is one of the highest compliments working farmers can pay to scientific men. They believe in the station and its work, and are reaping a benefit many fold the cost of conducting it. It is a matter of regret that a few state stations are manned by those who seem to care more for reputation among scientists while chasing some matter of no economic value than they do for practical results. Director Thorne, on the other hand, while standing very high as a scientist, has made the interests of agriculture his first thought, insisting in all departments of the station work that practical helpfulness to the producer upon his farm should be kept closely in sight. The result is that the many lines of experiments now being conducted under Director Thorne's supervision are carefully watched and studied by many thousands of practical men. The bulletins in the past have given us needed light, and we expect much of the future.

DAVID.

NEIGHBORLINESS ON THE FARM

A farmer's wife, speaking of the neighborliness which once marked the farm-life of this country, said in my presence the other day, "It seems to me that people are not so neighborly as they used to be. When I was a girl everybody was ready to help everybody else. I remember we used to have oxen, very few farmers of the neighborhood having horses; but when a man who did have went to the city ten miles away he would always stop and ask if we wanted to send for anything. And if any one was sick, folks were ready to go and wait upon them. It isn't so now. Nobody ever thinks of stopping to inquire whether we want to send to the city or not. It doesn't seem to me there is that friendly spirit among us that we once knew. And it is a pity, too."

Well, looking back through the years which lie between those old times when we were children, it does seem sometimes as if the present generation is somewhat behind our forefathers in respect to the little courtesies which go to make life happy in the country. It is a fact that when the farm-houses

were farther apart and people met one another less frequently a spirit of kindness characterized their actions in a very marked degree. Teams, wagons and such other farm tools and implements as farmers had were at the disposal of those not so well blessed. Sickness and trouble of any kind brought out all the thoughtful attention of those not thus afflicted. Men were ready to travel far and endure much for others.

A few years after the statement referred to was made a terrible wind-storm came up and swept the country half way across the continent, leaving ruined fences and damaged crops everywhere in its wake. Looking out over the neighborhood in which I live a day or two after the storm I could see men helping each other about repairing the losses done by the wind. Together they worked, mending the fences which had been blown away. Side by side they assisted one another in caring for stock which had strayed from their places, and restoring corn, buckwheat and other crops which had suffered during the gale.

Noting all these things, the question arose in my mind whether or not there was not really just as much neighborliness among farmers as there ever was. My belief that this was so was strengthened by learning of the kindness of some neighbors who went into the home of a family in which a child was sick and cared for it when the parents were sorely in need of help. Then, too, I recalled a number of instances in which the hands upon one farm had turned out and assisted a neighboring farmer to secure a lot of hay which happened to be down when a heavy storm was coming on. While thinking of this my mind reverted to a certain "wood bee" which the strong-handed young men of a neighborhood made to replenish the shed of a widow whose husband had died. Another bee was held a few months later on the same farm to cut and put in the widow's hay crop. It is only a few weeks ago that I was reading of a gathering at the farm-house of a Pennsylvania farmer who had been prevented by sickness from putting in his spring crops. On the day spoken of the farmers from far and near came with two, three and four horse teams loaded with farm implements. A little later thirteen plows were at work in the fields. A force of harrows followed. The seed was sowed and harrowed in. In one field nineteen two and three horse teams were at work at one time. When nightfall fell the spring crops were ready for the dew and the rain. Sixty men had done their best to establish the fact that neighborliness has not yet died out among the farmers of the present day.

Conditions have changed since, we were young. Now we are in close touch with the world through the stage-lines which pass our door every day. The mail service is almost perfect. If we need anything from the city now we send a letter and in a few days or perhaps only a few hours our errand is done. So we do not need to call upon our neighbors as we used to do.

Then, too, every farm is a little republic in itself to-day. Think of the array of tools we have which our fathers knew nothing about. Every good farmer possesses almost everything needed in the way of farm implements. There is far less need to call upon one's neighbors than in olden times.

All these things tend to assure us that the hearts of our farmer population are still warm, and that the golden rule has not yet lost its force. Sometimes we look back through the years as through a mist. Things seem so different to us from what they did when we were young. A golden halo surrounds those days. Then everything was bright and radiant with the sunshine of youth. Now many of us have grown soberer, and the glare of boyhood has given place to the more earnest glow of mature years. Often hard work and pinching care narrow our lives unnecessarily. We ought to keep our hearts fresh. Surely there is no occupation which has more beauty in it than farming. If we think men are less neighborly than in the past perhaps we ought to look into our own hearts a little and see if we are all right ourselves. Perhaps we have grown more selfish our-

selves. Are we as neighborly as we ought to be? Let us try to answer that question honestly and fearlessly, each one for himself. EDGAR L. VINCENT.

1.

INDUSTRIAL TRAINING IN THE SOUTH

Booker T. Washington, the founder and superintendent of the Industrial and Training School for Colored People at Tuskegee, Alabama, is beyond doubt the possessor of more genuine ability than any other man of his race in America to-day. In a recent address before the faculty, students and alumni of the Michigan Agricultural College he gave his views on the subject of "Solving the Negro Problem in the Black Belt of the South."

"The people of the North have been trying to solve this problem for us during the past thirty years, but their efforts have been in vain, because they have not worked on the proper lines. They have sent us teachers to educate us how to get along without work, and thousands of my brothers have been graduated along that line, to become a menace to the community in which they reside. We do not want that kind of instruction. We want to be taught how to make ourselves so useful that we will be welcome to any community. We must be taught how to do things—do them better than you can—and you will be glad to employ us. Permit me to illustrate by referring to one of the colored boys who took a course of training in our dairy-school. A certain creamery advertised for an expert butter-maker. Our boy applied. The directors objected to his color. He said he could make first-class butter. The directors read his testimonials, but hesitated as they looked into that black face. He was employed temporarily until another could be secured. The returns from the first shipment of butter showed an advance of one cent a pound. The boy was not so black as before. The next consignment was sold at an advance of three cents a pound above the market price, and the directors could not see that the boy was black, and employed him for a year, and he is still with them.

"The North has sent us preachers to preach about living in a great white mansion after we are dead, but we have to be content in old log cabins while we are alive. They have preached about wearing beautiful golden slippers, but most of us are compelled to go barefooted. They have taught us to sing 'Give me Jesus, give me Jesus, and you take all the rest,' and that is just what they did—took all the rest.

"Some great philanthropists say we must be sent to some special territory where we may reside by ourselves; but they will have to build pretty high walls to keep the black man in, and they will have to build about ten walls to keep the white man out. Besides that, we have a better right here than the white man. The white men came without any invitation and against the solemn protest of the oldest inhabitants; but he came and appropriated the fine hunting-grounds and the fertile plains. The black man had special invitations to come. Their passage from Africa was paid for them; it would be very ungracious and most ungrateful for us to leave now.

"Some years ago six hundred people sailed from Savannah for Liberia, Africa, and the news was heralded over the land that the race problem was solved. But, bless my stars! they forgot to figure on it. That very same day, before breakfast, there were twice that number of colored children born. How long will it require to solve the problem in that way?

"Some say the question will be solved by the absorption of our race in others through intermarriage. When? If a man has one per cent of negro blood in his veins he is a negro. It takes one hundred per cent of Anglo-Saxon blood to make a white man, but one per cent is enough to make a negro; hence, you see that we are the stronger race.

"The only way the negro problem can ever be solved is to train him to be useful. In that respect the slave was better off than the freeman. Every plantation was a training-school. They were our first agricultural and mechanical colleges. They take pre-

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NOTES FROM GARDEN AND FIELD

THE OUTLOOK.—I confess that at times this past season I have been utterly discouraged. Our markets were filled with fruits and vegetables to overflowing, and prices were discouragingly low at times. It does not seem to me a good practice to crowd things on an unwilling market. People get in the habit of paying little for their supplies, and it is all the harder after awhile to get prices up again. Better let a lot of stuff go to waste, rot on the ground or feed it to pigs and other stock than demoralize the market by flooding it with a lot of stuff to be sold at any price, even below cost of production. As long as it costs me more to gather a load of vegetables, get it ready for market and dispose of it in the laborious way of peddling than the returns from that load come to I had much better set my hands at other work or discharge them.

The "tail-end of the Texas hurricane" has whipped my apple-trees to such an extent as to knock off fully one third of the winter fruit. The ground under the trees, especially the Rhode Island Greenings, is strewn with apples. Many trees, where fully exposed, have been almost entirely stripped of fruit; others have only a fair setting left on the east side and on the lower limbs. Some of my friends have asked me what they should do with these windfalls. If picked up in crates or bushel baskets and taken to market they would sell for something, and many believe it to be better to dispose of them in this way even if they only bring fifteen or twenty cents a bushel than to get nothing for them. We could afford to sell them for cider stock at twenty cents or so a hundred pounds, but we should not put them in the general market to be used as cooking-apples at any such figure; better let them rot on the ground. There is too much poor stuff thrown into our markets, and it only helps to depress prices. Keep the miserable stuff at home, and let people buy the good fruit at decent prices.

THE HIRED HELP.—It is the hired-help problem that I have not yet been able to solve. I have to pay good prices. Day-hands have commanded one dollar and a half a day right along this summer, and it is mostly unreliable help at that. So if I desire to reap any profits on their labor, at ordinary prices of produce, I have to look after them pretty closely, and if possible work with them right along. I contracted to have my corn cut at one dollar and a half an acre rather than pay one dollar and a half a day. The corn was heavy, but the man cut five acres in about three and one half days. At day wages it would have taken him five or six days to cut that number of acres. Years ago I remember when we had hands cradling and binding grain or digging potatoes the practice was to "race" it; that is, to see who could cut or bind his swath or dig his row of potatoes the quickest. It kept every one on the move, and the work progressed at a good rate. The employer never had reason to find fault with his men for idling or shirking. Every hand was ready to give his best service, and the "racing" feature seemed to be a great stimulus; indeed, rather an enjoyment. But times seem to have changed. Many of the helpers of the present day work only for what they can get out of the job.

PROMISING CROPS.—This state of affairs more than anything else is what discourages me. I cannot stay with my workmen all the time. If they are not such as to give me good service for good pay without being constantly watched I have no use for them. The high price and the unreliability of labor is what drives me out of the business. I am going to contract rather than expand my efforts after this year. Instead of trying to farm it on a fifty-acre scale I shall after this confine my efforts to twelve or fifteen acres, and rely on my own work and the help of a younger

son (fourteen years old) to raise the garden stuff and fruits needed for the family, with some feed for one horse and one or two cows, etc., and possibly a few specialties which are especially promising for profit. Among the latter, of course, will be that grand, sweet Gibraltar onion raised by the new method; also strawberries and other small fruits, and possibly some roots, especially horse-radish and parsnip. Rhubarb is also one of the paying garden crops which I will not neglect. Strawberries if well taken care of have seldom failed to pay well in this locality. I have a nice patch of them for first fruiting next season. Among them I have Brandywine, Rough Rider, Wilson's, besides a mixture of Bubach, Splendid, Haverland and many others, all these mixed promiscuously in the rows.

WEEDS AMONG STRAWBERRIES.—During the latter part of summer this strawberry-patch had to be badly neglected. The rows were so overrun with weeds that the plants could hardly be seen. One of these weeds was purslane, and the plants were very thrifty and big. Fortunately they were attacked by a blight, and this has almost cleared the patch of the purslane pest, so that all I had to do was to pull up the few tall weeds in the rows and the patch appeared as clean as if no weeds had ever started. You know that we have had few rains this summer; consequently, there are not as many plants in the rows as an ordinary wet season gives us. But there are just enough to give me a good stand by next fruiting season, and as the rows are four feet apart there is plenty of chance to keep the space between the matted rows well cultivated. I am not going to let the rows run so close together again that I cannot go through with the cultivator. Those densely matted rows with soil hard and packed all around and between them soon dry out so that there is no moisture left for the fruit to fill out in a dry season. I propose to keep on cultivating up to nearly fruit-picking time and then apply a good clean mulch of marsh-hay if I have to pay fifteen dollars a ton for it. I rather expect a good demand and good prices for the strawberry crop in this vicinity for next season. The thousands of visitors who will be called to Buffalo, Niagara Falls and vicinity by the great Pan-American Exposition in 1901 will be ready to consume large quantities of this fruit, and the demand for it will undoubtedly be brisk.

A NEW GOOSEBERRY.—A friend in California a year ago last spring favored me by sending me a few plants of a new gooseberry. One of these plants gave me a few dozen berries this year, and I must say that I have never had a gooseberry of such exceptionally fine quality before. The berry was only of medium size, not nearly as large as Columbus (Triumph?), but the flesh was more of the consistency of a soft plum than of that pulpy character of the ordinary gooseberry. I have hilled up the plant, which now has about a dozen canes, for the purpose of getting well-rooted layer plants; and I propose to propagate it as fast as I can for my own use. But, friends, don't ask me for plants! I cannot, and will not, supply them even to my best friend. If the new berry turns out to be as valuable as I expect, undoubtedly the originator or discoverer will put plants on the market in due time. If he should see this notice I hope he will write me, giving the history of this gooseberry.

ASPARAGUS-RUST.—B. J. B., of Genoa Junction, Wisconsin, has a patch of asparagus which is badly rusted. He desires to know whether it is safe to keep the bed over or whether it should be plowed up. I believe that the treatment suggested—namely, of cutting and burning the diseased stalks—is correct. I would not destroy the plantation. Diseases come and go. Rust may attack the plants one year and leave them entirely untouched the next year. Cut the stalks next year in the usual way until the end of the cutting season; then let them grow up and keep them well sprayed with Bordeaux mixture.

T. GREINER.

ORCHARD AND SMALL FRUITS

CONDUCTED BY SAMUEL B. GREEN

INQUIRIES ANSWERED

Propagating the Magnolia.—A. P. W., Bishopville, S. C. The magnolias are generally grown from seed, which may be obtained through J. M. Thorburn & Co., New York City, and of our principal nurserymen. They are also grown from layers made in spring, which will generally strike root in one year.

Spacing Fruit-trees.—G. H. C. W., Washington, D. C. The proper distance between fruit-trees will often depend much upon the variety of the tree planted, as upright or weak growers may be safely planted much nearer than strong-growing spreading kinds. In a general way, however, in your section apples should be planted about forty feet apart, pears, plums and peaches twenty feet apart, and quinces twelve feet apart each way. Raspberry-plants are perhaps best when planted from three to four feet apart in rows seven feet apart.

Grape-growers' Manual—Seedlings of Althea—Hardy Grapes.—J. B., Jr., New-haven, Indiana. You can get Bush & Son & Meissner's manual by addressing them at Bushberg, Missouri, and inclosing fifty cents. —The seed of althea should be mixed with sand, put in a box and buried in the ground over winter. In the spring it should be sown in light, loose soil. —I do not know of a variety of grapes similar to the Clinton, but white or red in color. Moyer, Woodruff, Telegraph, Columbian and Cottage grapes are all hardy enough for northern Indiana. The Highland is doubtful, and should be tried only in extra good locations.

Oyster-shell Bark-louse.—G. H. D., Monroetown, Pa. Your willow is infested with what is known as oyster-shell bark-louse. I think the best treatment will be to let it alone until the leaves fall, and then cut off all the weak and dead wood, and especially cut off all suckers that come from the root. Then on some cold, bright day paint the scales wherever found with clear kerosene, put on with a paint-brush. If no more kerosene is used than is necessary to nicely wet the scales there will be no danger of injury to the tree. Paris green is of no use in destroying insects except such as bite their food. It will not kill sucking insects such as scales.

Fruit from Seedling Trees.—J. C. F., Ives, Neb. None of our tree-fruits except a few varieties of peaches can be depended upon to produce seedlings true to name from the seed. In the case of a few varieties of peaches trees may be grown nearly true from seed. When our tree-fruits are grown from seed there is often very great difference between the seedlings, none of which may perhaps resemble the parent. Thus, from the seed of the Duchess of Oldenburg apple, which is large and striped with red, I have seen raised large green apples resembling the Rhode Island Greening of excellent quality, and apples not much larger or better than an inferior crab, and many that somewhat resembled the parent. The form and shape of the seedlings may also vary greatly; some may have wood and foliage resembling the parent, and others may have the thorns and thin leaves of the wild crab.

Water-cored Apples.—L. C. F., Kirkersville, Ohio, writes that he has an early strawberry apple-tree about sixteen years old that has been bearing the last five years. Previous to this year the apples have been water-cored, but this year they are rotting on the trees before they get ripe, while other trees in the orchard are doing finely. He wishes to know the cause and remedy. There are some varieties of apples that are more liable to become water-cored than others. Water-core is most likely to occur, first, when there is a lack of vigor in the tree; second, where there is a lack of moisture in the soil; third, from fungous diseases on the foliage; fourth, from want of lime and potash in the soil; fifth, from bark-lice or scale. The remedy would be, first, to increase the vigor of the tree by cultivating and enriching the soil, and judicious winter pruning; second, mulching, to retain moisture; third, spraying with Bordeaux mixture, to kill the spores of fungi; fourth, to supply lime and potash to the soil in the form of wood ashes and waste lime or gypsum; fifth, to rid the tree of scab by a spray or wash of whale-oil soap-suds. In the case of the tree in question I judge that the best remedy would be to dig out the tree and set another one in its place. In some cases a half peck of salt sown about the tree in the spring as far as the branches extend has proved very beneficial. I would not advise setting another tree in the same place until the spot had been cultivated one or more years; and if the hole for planting is dug in the fall and left open through the winter it is all the better.

Fall-planted Strawberries—Black Currants—Carolina Poplars.—J. R. R., Calumet, Mich. Strawberry-plants will not bear much fruit if planted in the fall, although if they are fall-planted and come through the winter well they will generally bear some fruit the next season. The chief secret of success in fall-planting lies in moving them with as little injury to the root as

possible. When they are to be taken from some near-by bed they should be moved with a ball of earth. Sometimes flower-pots are set under the runners in August and the runners allowed to root in them, and when well filled with roots the plants can be easily moved to the new bed without injury. In order to secure good results rich soil should be used and the best of cultivation given. On the approach of winter put a spadeful of dirt over each plant, and cover with a little mulch. In the spring the dirt can be easily removed with an iron rake. —Black-currant bushes will do very well when set out in the autumn. They should be planted out about the middle of October, and special pains should be taken to make the soil very hard around the plants; they should then be banked with soil for six or eight inches on the approach of winter. —The "Carolina poplar" is not a good tree for dry soil. If the soil of your lawn is moist as well as gravelly it will be a good place for this tree, but otherwise it should not be planted, unless you will dig out at least two two-horse loads of gravel and replace it with rich loam. If you are to start with trees you should get thrifty stock about two years old. If from cuttings, make them of wood at least three fourths of an inch in diameter and six feet long, and put them at least three feet in the ground. But of course this poplar can be grown from cuttings in the ordinary way.

Blackberry Culture.—F. D., Brockton, Ill., requests me to tell him all about blackberry culture. This cannot well be done in the brief space of the question department of the FARM AND FIRESIDE. The ideal place for a blackberry plantation is on a light, moderately rich sandy loam soil in a sunny exposure. Heavy, moist soils and partial shade, which is the delight of the raspberry, tend to produce a rank growth of long-jointed canes that winter generally finds unripened and unable to endure the frost without injury, and on hard, dry land the fruit often never matures and becomes mere collections of seeds. The soil should be well prepared by as deep plowing and thorough loosening as possible. Melowness of soil is of more importance than richness. In field culture the rows should be eight feet apart, and the plants three to four feet apart in the row. Fifteen hundred to eighteen hundred plants will be required to plant an acre at these distances. As generally grown they require support, and may be tied to stakes or trained upon a cheap post and wire trellis. If the ground is found to be too poor, compost or good barn-yard manure may be profitably scattered in the furrows at the time of planting. If rightly managed supports may be dispensed with. When the shoots that are to produce fruit the following year have reached a height of two feet the terminal limb of the cane should be pinched out, to cause them to branch, and they can by a little attention be formed into a low, bushy shrub, and stocky and self-supporting at the same time. Frequent cultivation is necessary, and liberal mulching at the season of ripening and picking very essential. The best plants are one-year-olds grown from root cuttings. Good varieties for Illinois would be Wilson's Early, Snyder and Ancient Briton. Suckers that will spring up freely should all be kept out, except such as will be needed for fruiting canes, or the plantation will soon become a wilderness of briars. Plants may be set either in the fall or very early in the spring.

Injured Maple-leaves.—Some time ago L. R. M., Buffington, Ky., inclosed to me leaves from a maple-tree, and writes that several of the branches have leaves like the smallest one, while many other leaves are like the three larger leaves sent. The tree is valuable on account of being near the porch and shading it. The larger leaves had a bag-like pocket attached to them. Professor Singleford, of the Cornell University, thinks this is caused by a small mite, but not a tiny insect, and does not know of a case where it has been particularly injurious to the tree. The smaller leaf was submitted to Professor B. M. Dugger, of Cornell University, who pronounces it to be the "maple seorch," which is quite prevalent in many sections this season. He writes that "it is an affection entirely independent of any fungous or bacterial cause, and hence not contagious, and that it is caused by some unfavorable conditions to which the trees have been subjected. One cause of it is deficient water supply. The leaves of the maple throw off by evaporation large quantities of water, and this water must constantly be supplied by the roots. When the leaves are transpiring more freely than the roots are absorbing water the maples seem to be poorly provided by means of drooping or by special microscopic characters of the leaf to prevent excessive evaporation. Therefore, if we have a prolonged dry season, an unusually hot wind, or similar unfavorable conditions, the trees give off so much water from the leaves that drying out, finally browning and death, of the leaves must result. It is sometimes occasioned by the escape of illuminating gas in the soil. In case the trouble results from deficient water supply there is a possibility of a remedy. In a yard or on a street-corner it would be an easy matter to remove the earth or loosen up to a depth of six inches for a considerable area around the crown, mulch well and water heavily. This would help to guarantee a recovery next year, for if this drying out continues several years the death of the tree will follow.

REFORESTATION IN COLORADO

[CONTINUED FROM FIRST PAGE]

Recently Prof. Charles S. Crandall, formerly for many years at the head of the department of horticulture and botany in the Colorado State Agricultural College, was appointed to the section of forestry in the Department of Agriculture at Washington, and has been assigned to make an exhaustive study of the forest conditions of Colorado, with a view of preservation and reforestation. A long time previous to his appointment Professor Crandall had made a study of forestry. During his long services in the State Agricultural College he spent frequent intervals in studying the forests of the Rocky mountains. He had written numerous essays and delivered various addresses upon the subject, and at the time of his appointment was in Berlin spending his summer vacation in the study of forestry in a prominent German university, and he will bring all of his learning to bear upon the duties of his new office. On August 1, 1900, Professor Crandall started out on an expedition for the exploration in the mountains of northern Colorado. Just previous to his departure the writer had a brief talk with him upon the subject of Colorado forests. He said that he was convinced by the results of his previous investigations that the mountains of Colorado were in former years covered throughout nearly their entire extent with a heavy growth of yellow pine and Douglas fir, but that they had been largely denuded by recurring forest fires. To fix the dates of principal conflagrations was a task of great difficulty. However, he had determined the dates of two of these—one in 1811 and another in 1843. Over the scene of the first now grows a thrifty forest of yellow pine fifty years of age; on the ground swept over by the second there now grows a forest of lodge-pole pine. He estimates that a period of one hundred and fifty years is required to grow a forest in the Rocky mountain regions similar to those of larger growth now found in northern Colorado. One forest fire devastating a given tract of land would not be so bad, for a new growth would spring up and make good progress toward reforestation; but the second, and most surely the third, will so destroy the soil properties of the land as to almost preclude the possibility of reforestation unless by artificial means. The only remedy for the wholesale destruction of the forests by fire that he is able at present to recommend is government reservation and a thorough patrol. Reservation would also, in a large measure, put a stop to the system of vandalism now in vogue under the open-range system.

INDUSTRIAL TRAINING IN THE SOUTH

[CONTINUED FROM PAGE 4]

edence over this grand institution. The common colored laborer would sell for about eight hundred dollars, while the colored mechanic would bring fifteen hundred dollars, and at the same time and in the same markets a white man would not sell for fifty cents; yet some people delight in talking about the superiority of the white race.

"When I first went to Tuskegee to establish our institution, and put into practice my plans for solving the negro problem, the white people would not look at me; but we soon started a brick-yard, and these same people came to buy our brick. We next started a wagon-factory, and these people came to buy wagons and buggies. We then started a creamery, and these people were glad to eat our butter. We started a printing-office, and printed the papers for our Democratic and Republican editors.

"We have now eight hundred acres of land, forty-eight buildings, eighty-one instructors, eleven hundred students and a total population of thirteen hundred people. We recently completed a chapel that seats twenty-two hundred people, and every portion of the work, from the making of the brick and laying of the walls to the furnishing and decorating, was done by our students. There is not a mortgage nor the shadow of one on any of our property. We have learned that there is truth in the scriptural injunction

which says, 'Ye shall work out your own salvation with fear and trembling.' We must place skill, intelligence and dignity in all our labor, and it then becomes a pleasant task. We train our pupils to look upon idleness as a disgrace, and that honest labor is noble, dignified and desirable."

The address of Mr. Washington was both entertaining and instructive, and was listened to by two thousand attentive hearers. I have given only a brief synopsis, but it is perhaps sufficient to show that the speaker has well-defined ideas that have proven practical and will bring untold blessings to many thousands of colored boys and girls in the South.

JOHN L. SHAWVER.

OUR FRIENDS, THE BIRDS

A bulletin of the Department of Agriculture gives the analysis of the contents of the stomachs of two woodpeckers: "Two thirds to three fourths of the food consisted of insects, chiefly noxious. Wood-boring beetles, both adult and larvae, are conspicuous, and with them are associated many caterpillars, mostly species that burrow into trees. Next in importance are the ants that live in decaying wood, all of which are sought by woodpeckers and eaten in great quantities. Many ants are particularly harmful to timber, for if they find a small spot of decay in the vacant burrow of some wood-borer they enlarge the hole, and as their colony is always on the increase, continue to eat away the wood until the whole trunk is honeycombed. Moreover, these insects are inaccessible to other birds, and could pursue their career of destruction unmolested were it not that the woodpeckers, with beaks and tongues, dig out and devour them."

I do not believe that these little friends are half as much appreciated as they should be. They are at work all winter, and I verily believe that our old apple orchards would not live out half their years without the help of this particular friend. Allowing that one variety is a sap-sucker, the balance is still largely in their favor. I do not know of any special damage that has been done by the yellow-bellied sap-sucker, unless it be to the birches. The blue-jay, who is about our shrubberies at all seasons, is another helper that I wish we might increase. A dissection of two hundred and ninety-two stomachs gave about one fourth of animal matter.

My purpose, however, is to suggest a few ways in which we may increase the settlement with us of the most valuable winter birds. It is not the climate so much that sends the birds away from us as the lack of food. By freely planting along the fences and in our pastures, as well as on our lawns, the mountain-ash and the Tartarian honeysuckle and the high-bush cranberry we shall be able to supply without any cost to ourselves an enormous amount of bird food. In fact, I know of but one berry that commonly appears on our lawns which is not eaten by the birds; I mean the blackthorn, or buckthorn, berry. A single tree of mountain-ash will feed all the robins that will visit you through the fall months and still have a surplus for winter friends. I do not see any reason why we should not make this tree more common as a field-tree. It is particularly well fitted to form shelters in the corners of our pasture-lots. Nor have we any small tree better fitted to plant for wind-breaks. Plant closely along the west and north sides of your land. The tree is entirely hardy, and does not easily break with severe winds. The barberry is eaten by a few of the birds, and can be provided in unlimited quantities. The fruit of the Tartarian honeysuckle is so much liked by the robins that I am afraid we cannot keep much of it for winter use. It is the best of all the shrubs for either ornamental hedges or low wind-breaks.

Besides providing such foods as the birds need we shall attract them to us by providing proper shelter. Here it is that they need almost exactly what we need ourselves; that is, good, thick evergreen wind-breaks, evergreen groves and evergreen hedges. We can change our climate at least two or three degrees by such judicious planting. The birds soon find this out and will come

with us when we make our own homes warm and cozy. Can you conceive what summer would be without the birds and their songs? Think what winter could be made by the addition of more bird life and of occasional bird music. Some of our most useful birds are changing their habits and habitat owing to a decrease of favorite food and preferred nesting-places. If we must lose some of our favorite summer birds, it would be compensation to increase the number of those who are able to spend the winter with us.

E. P. POWELL.

BEGIN CHORING in time to be well through with everything before dark. Many barns have been burned by neglect of this simple rule. The farmer is entitled to his evenings, and the hired man will do better work if he knows he is not to be kept on the go until dark before beginning to do chores.—Farm Journal.

CORRESPONDENCE

FROM TENNESSEE.—I have lived in Lawrence county more than a year, and like it very well. We have short winters, and always a good breeze in the summer. Work is plentiful; wages \$1 a day, and \$2 to \$2.50 a day for teams. Everything we use that is made in the South is very cheap on account of the cheap labor. Land is cheap; some small farms sell at \$5 to \$10 an acre, and less for unimproved land. Land is not so rich as in the Northern states, but raises very good crops if farmed right. This is a good stock country, with plenty of natural grass and good water. I would advise any one wanting a cheap home to try Lawrence county.

Ethridge, Tenn.

E. H.

FROM OREGON.—I came to Oregon thirteen years ago. I now own one hundred and sixty acres of timber land—five acres cleared—and a house and two lots in a thriving town near by. I have a wagon and a team of horses, five head of cattle, a good five-room house and a barn forty by sixty. This is a good stock country, but stock should be housed in the winter from the cold rains and occasional snows, hence my large barn. I landed from the Columbia river steamer six miles from my present home in two feet of snow on thesecond of February thirteen years ago, with one dollar and seventy-five cents in my pocket, two thousand miles from home and acquaintances. What I have is all paid for. What one man has done others may do. There are men here who have done better than I. I have been a FARM AND FIRESIDE reader for twelve years, and have found it a faithful friend.

Quincy, Oregon.

H. S. G.

FROM CALIFORNIA.—THE SACRAMENTO VALLEY.—For the past few years I have resided in the fertile Sacramento valley, equidistant from the capital city and Stockton on the Southern Pacific railway. In this vicinity the very best farm land can be purchased for from \$40 to \$50 an acre. There is an abundance of water from fifteen to twenty feet below the surface. The soil under cultivation produces all kinds of grain; it is admirably suited for the raising of semi-tropical fruit and all sorts of vegetables. Produce can easily be shipped in every direction. Within a three-mile radius of my residence are chicken-fanches. The owners grow abundantly grain, alfalfa, clover and other green food, to supply the wants of the fowl. Turkeys are raised in large herds in the foot-hills, where suitable land may be had for from \$12 to \$20 an acre. Both businesses have proved profitable.

T. J. C.

Arno, California.

FROM TENNESSEE.—The soil in this part of middle Tennessee—Coffee county—is not the best, although by the use of manure or commercial fertilizer very good crops can be grown. The crops usually grown for market are wheat, winter oats, corn and cow-peas. Wheat yields a nice plump berry, but twenty bushels an acre is considered a good yield. The cow-pea can be turned to many uses—it makes good hay when cut early, and makes good feed for poultry, hogs, sheep and cows. Among the other crops grown are sweet-potatoes, sorghum, peanuts and the usual garden truck. Irish potatoes are a good crop this year, but as a rule they do not do well. We have plenty of good water here—wells, springs and flowing streams. The climate is mild and healthful. Improved land sells for from \$10 to \$25 an acre. Wild land (timber and brush) sells very cheaply, and there is plenty of it, but much is very poor. Sheep do well here, especially for early lambs and mutton, and would be a source of profit to the farmer if it were not for the country being overrun with dogs. Goats, also, do well, but as yet very few are raised. Some fruits do well; others not. Early apples do well, late ones not; peaches do well early and late; native plums do well; blackberries grow wild in great profusion and can be had for the picking. Wages are very low here—only fifty cents a day, without board. Manchester is a thriving little town and a great poultry market.

Manchester, Tenn.

A. G.

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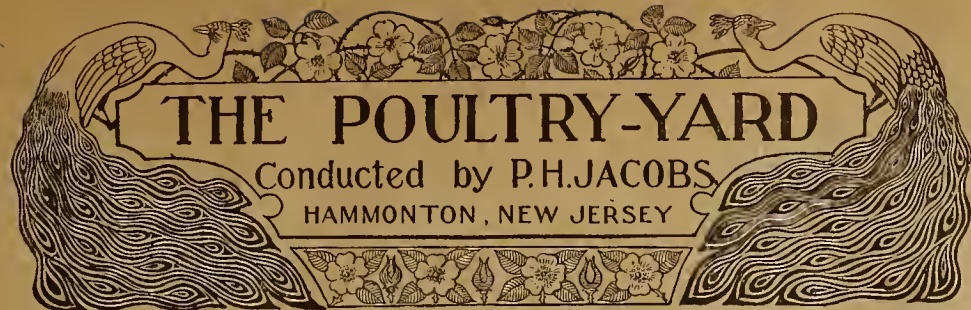
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SCIENTIFIC FEEDING

MANY farmers do not fully understand the terms used by those who give directions for feeding, although some farmers have made such matters a study. A farmer may not know the relative proportions of the several substances in foods, but he should endeavor to learn by experience what to give his flocks, what to avoid, and how much and how often. The two principal substances in foods desired for poultry are nitrogen (for flesh, albumen, etc.) and carbon (for fat). The nitrogenous foods are meat, beans, clover, and to a certain extent grains. The carbonaceous foods are corn, fat meat, grease, rice, etc. If a hen is fat she needs no food excelling in fat. Hence, finely cut clover hay scalded in the morning, with a tablespoonful of linseed-meal at night, is better for egg production than grains. If the hen is poor give grains at night. All foods, however, contain fat and also some nitrogen. It should be borne in mind that the more quiet and sluggish the disposition the less corn or heating food is required. A laying hen should never be very fat, for the accumulation of fat is very injurious to reproduction. If too fat the hen may not lay; she becomes egg-bound, breaks down, and soon proves unproductive. Any fowls that are active foragers and are laying may be fed all they will eat; but if the hens are apparently in good health, but do not lay, feed no corn, give plenty of meat and allow bulky food, or they will fatten quickly. If fed heavily a hen will either lay or fatten in a short time, and if the hens are Asiatics and cease to lay the feeding must be done cautiously. It is even better to get them down to a poor condition rather than permit them to become too fat. An excellent mode of feeding is to allow plenty of bulky food, and to give each hen an ounce of raw chopped meat in the morning and whole oats at night. A few grains of wheat or corn may be scattered in litter, in order to induce them to scratch, which will be beneficial; but grass may be fed freely. There is no advantage in breaking an Asiatic from sitting; but the best way to break her is to place her on a grass-plot or in a yard and compel her to hunt for her food. A box may be allowed her at night, which should be removed the next day, unless in damp weather. The object should be to get her to work and reduce her in flesh. If food is scarce in the yard a few oats at night may be given. If all breeds are kept together some of the hens will lay, while others will not, for the reasons given above. Therefore, it is best to keep only one breed, so as to give all the hens the same management.

BONE, GRAVEL AND SHELLS

Grinding the food in the gizzard is a natural process, and there are three substances mostly used—gravel, oyster-shells and bone. The latter is serviceable either as fresh-cut bone or when hard, dry and ground. Gravel as usually found in most soils has been rounded by the air, water and heat, and through wear and tear. Unless sharp it is valueless. As soon as the fowl rounds a sharp substance in the gizzard it is voided; hence, the hens prefer sharp shells to round gravel. The reason they eat more shells when laying (or sharp grit of any kind) is because when laying more food is required, and consequently more digestion and assimilation. Because an egg has specks or flakes of lime on the shell does not imply that it is due to feeding shells, as the same thing happens when no oyster-shells are given. It may be due to the food, for as a rule such hens are fat. Some kinds of gravel are limestone and of the same composition as oyster-shells. There are thousands of

hens that get no oyster-shells, yet they do not lay soft-shelled eggs. Bone contains nitrogen, and is itself mostly phosphate of lime. There is but little difference in commercial bone and that from the butcher, except that the fresh bone is free from odor, while the nitrogenous matter of the commercial bone is partly decomposed. Hens dislike the odor; the chemical value is about the same. The advantage of ground bone (not bone-meal) or pounded bone over oyster-shells is that the bone is harder and serves as a grit. It also contains nitrogenous matter. A portion of it is changed during digestion into phosphates of potash and soda, and again into phosphate of lime, as well as other salts. It offers a wider field for chemical action than carbonate of lime (oyster-shells) when eaten, and contains nourishment, which is not the case with shells.

GREEN FOODS

It is difficult to obtain green foods after frost comes, but the cutting and scalding of clover will answer all the purposes required. It may also be mentioned that if good clover hay is cut and scalded for cattle in winter less ensilage would be necessary; but it is cheaper to use ensilage for cattle than to cut and scald the hay, and all kinds of poultry will eat the ensilage cut for cattle; however, it is usually cut too coarse for them, and they prefer their food very fine. Almost any kind of good hay cut one half inch long will be readily eaten, and if ground grain is mixed with it the rations will be more complete and better adapted to the requisites of the fowls; but clover should be preferred. Small potatoes also are worth as much for feeding to poultry as the large tubers. The value of an article does not always depend on its market price, but on the uses to which it may be applied. Hens are very partial to potatoes, and if the small ones are cooked and fed to them they can pick them to pieces without any other preparation. As winter food for ducks small potatoes are excellent. Separate them from the larger ones, and store them in a convenient place, where they can easily be handled when wanted for use.

OPERATING AN INCUBATOR

When using an incubator the conditions for success should not be overlooked. The temperature of a room in which an incubator is placed should be uniform, especially if it is a self-regulating machine and made without sawdust packing or air-spaces. Contraction and expansion are constantly going on, owing to the heat and atmospheric influences; hence, the temperature in the egg-drawer must be affected by it. The machines which are constructed with several inches of sawdust packing between the egg-chamber and outside case, or which have an air-space between the cases, fluctuate but little in temperature. An incubator should be heated, operated and thoroughly tested in every part, in order to be sure that the temperature is the same in the front, back and sides of the egg-drawer. In rainy weather less moisture is needed in the machine, especially if there is a valve on top to let off surplus heat, for it admits saturated air into the egg-drawer at the same time. But little, if any, moisture is required until the chicks begin to hatch; but the keeping of the temperature of the egg-drawer should be such that it will not absorb the natural moisture of the egg. Too much moisture is worse than none at all. By placing a wet sponge in a small cup in a drawer one can soon determine the amount needed. If it remains moist for six hours you may rest assured there is ample moisture. If it dries in that time you have not sufficient moisture, and more must be supplied.

THE POULTRY CROP

It is claimed that the supply of poultry for 1900 may not be up to the demand, and if such is true there will be good prices after winter sets in. It is the custom to kill late chicks and keep them in cold storage, but this supply will also be correspondingly short. Next spring the prices for the early broilers will no doubt be higher than for many years previously, and the incubator will pay if managed properly. Laying hens that are now molting should be retained as well as the pullets. At the present time the supply may be ample and prices not so high as may be desired, but that is due to the custom of selling off the old hens in summer, as well as those that are molting. The farmer who sells his hens now will really make a sacrifice, as they will give more profit later on than can be derived from their sale at present. It is in order now to sell off the cockerels, so as to make room and get rid of a lot of drones that have good appetites, but which produce nothing.

WHITE ON LANGSHANS

Many experienced persons are puzzled when purchasing Langshan eggs, as the chicks come out black and white instead of black. They usually become black on reaching maturity, but a few white feathers remain on the feet of the best of flocks. The Langshan should have white skin, pink webs between the toes, and be as free from yellow on the skin or bottoms of the feet as possible, as such indicate Cochinchina blood.

CORRESPONDENCE

CRUELTY TO THE "SITTERS."—During the late summer and early fall months many cruel methods are practised upon the poor hen to induce her to give up her natural and lawful right of sitting. I once heard a farmer who lived near a lake say, "When I want to break a hen of sitting I take her out a short distance on the lake and toss her overboard; if she goes to her nest when she gets ashore I catch her and throw her in again; she soon gets tired of this, and stops sitting." Still another breeder says, "I shut my hens in an empty barrel for a week when I want to break them of sitting; to be sure, I sometimes forget them until they are half starved, but they soon pick up again." I consider the above methods both cruel and unprofitable, and will now give you my plan. It is not always practicable to close the nest or tear it away, as there may be other hens laying in it; therefore, I have a fair-sized apartment—the children call it the "Libby prison"—in which I shut the sitters for three or four days. I then let them out on trial, and if any persist in sitting they are again confined in the "Libby" for a few days. This prison differs from the noted one for which it is named in that there is in it an abundance of food and water, air and sunshine, and the prisoners emerge therefrom in better condition than they were at the time of entering. Eastmanville, Mich. M. G.

INQUIRIES ANSWERED

Geese Become Lame.—M. S., Russell, Kan., writes: "Nearly every year my geese become lame. They have the run of the farm, with Kafir-corn and milk at night."

REPLY:—You have probably overfed them, especially during the warm weather. Omit the corn and milk and compel them to subsist on grass.

Cement Floors.—A. L. L., Union City, Ind., writes: "What kind of a floor does cement make? Will it become saturated and foul under the roost?"

REPLY:—If well made it is the best kind of floor, but should always be covered a few inches with dry earth, leaves or some absorbent material. The only objection is that such floors are cold, but not if covered as stated.

Warts on Chicks.—"Subscriber" writes: "What causes warts? Please give a remedy."

REPLY:—They may be due to parasites or some skin disease, which should be described in detail in order to permit of a satisfactory reply. The following has been found excellent: Cedar-oil and sassafras-oil, each one teaspoonful; lard, one gill; earbolie acid, twenty drops; sulphur, one tablespoonful. Mix well, and apply once a day.

Breeds of Turkeys.—Subscriber writes: "1. How many breeds of turkeys are there? 2. Describe the Slate and Narragansett. 3. What is the difference between the White Holland and the Mammoth White? 4. Which breed is the largest? 5. Which breeds are the best layers? 6. How high should a fence be to confine them?"

REPLY:—1. Six—Bronze, Black, Slate, Buff, White and Narragansett. 2. They are mostly designated by color, the Narragansett resembling the Bronze somewhat, but metallic-black instead of bronze. 3. None. 4. Bronze. 5. There is but little, if any, difference. 6. They cannot be closely confined.

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QUERIES

READ THIS NOTICE

Questions from regular subscribers of FARM AND FIRESIDE relating to matters of general interest will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Curing Side Pork.—W. G. N., Beaver, Utah. Lay the sides on a table and rub them thoroughly with a mixture of fine salt, sugar and saltpeter (one ounce of saltpeter and two ounces of brown sugar to five pounds of salt). Pile up the pieces with salt between. Repeat the rubbing every few days until the meat is thoroughly salted through. It is then ready to be canvassed or put in the smoke-house.

Spruce-log Water-pipe.—B. M. S., Steel, Pa., writes: "I wish to lay some water-logs from a spring to my farm buildings. I have a lot of spruce that will work nicely. What is its lasting quality?—What is the best and quickest way to turn cider into pure cider vinegar?"

REPLY:—Spruce water-logs laid under the ground with water running through them continually will last many years. You need not hesitate to use them if they are much cheaper than iron pipe.—The quickest and best way to turn cider into vinegar is by means of a vinegar generator, in which the cider drips slowly from one vessel to another over surfaces exposed to warm air.

Remedy for Ivy-poisoning.—D. L. L., Newburg, Tenn., writes: "Some years ago a friend of mine had a very sore arm, poisoned by the three-leaved ivy. The poison sores extended from the wrist nearly to the elbow. Many remedies were tried, but the poison surface sores kept on increasing. She said to me one day, in despair, 'What can I do to stop and heal these poison sores?' I had learned to use kerosene for almost everything, and replied, 'Why, put kerosene on them; that will cure them.' She applied kerosene, and her arm was well in a very short time. I always keep a bottle handy to apply to stings of wasps and the like, and mosquito-bites, bruises, scratches and all sorts of sores on persons or animals."

F. F. G. writes: "Having had a good deal of personal experience with both poison-oak in California and poison-ivy in Ohio, and having tried nearly all remedies which could be suggested to me either by individuals or physicians, I found the simplest and most efficient cure in the plentiful use of hot water applied as soon as possible after exposure to the poison. I would apply the water as hot as I could well bear it at first, and then increase the heat somewhat, using with the latter application a good pure soap."

Bisulphide of Carbon for Weevil in Stored Wheat.—H. D., Vincennes, Ind. Your query is answered in full by the following bulletin of the Maryland Experiment Station: "The remedy for this pest is a simple one and not difficult to apply, but must be handled with great care. Bisulphide of carbon is the material used. It is a very foul-smelling, volatile liquid, as clear as water, the fumes of which are several times heavier than air. They create a death atmosphere in which no animal life can survive. The material can be placed directly upon the grain without the least deleterious effect, so far as injury to the germ is concerned, and does not hurt its edible properties. Although a very foul-smelling liquid, it leaves no bad after-effect, and is sure death to insects wherever it reaches them. From one to two pounds of the material is all that is necessary for every hundred bushels of grain in store, or the same amount for every thousand cubic feet of space. The amount used depends upon the tightness of the building or bin and the intensity of the attack. If the bin is very tight one pound of bisulphide to every hundred bushels will be sufficient. If open use two pounds. In applying the chemical, after the capacity of the bin or house has been determined, it should be placed in tin pans, soup-plates, or any vessel with a large evaporating surface, and set around directly on top of the grain. The room or bin should be closed as tightly as possible and left for at least twenty-four hours. I would advise its use in pans or soup-plates, as the fumes are kept more constant for a greater length of time, as evaporation is gradual, and better results are secured. Caution—It must be borne in mind that this material is a very explosive one when the fumes are mechanically mixed with air; therefore it must be handled with caution during the fumigation of a house or bin. Especial care should be taken that no lights or persons with a light of any kind, even a cigar or pipe, are allowed around the room or building. With this caution there need not be any fear to persons applying it, as a reasonable amount can be inhaled without injury during the operation. Of course, it is necessary for the person applying the material to get out of the building as soon as possible.

Churns.—J. C. C., Eber, Tenn. Revolving churns without paddles or dashers, turned at moderate speed, are the favorites with progressive dairymen who produce butter of the finest quality. Geared, or high-speed, churns bring the butter in much less time, but at a great sacrifice of quality.

Substitutes for Hay.—Referring to an article on substitutes for hay Mr. R. C. M., Olney, Ill., writes: "I am a grower of soy-beans and Kafir-corn to the extent of one hundred and fifty acres, and have a number of years' experience growing for seed and for feed, and feeding them. I want to be believed when I say that one year with another with cow-peas, Kafir-corn, soy-beans and corn fodder I can grow more than double the amount, and by properly blending these feeds have a balanced ration that is in every way better than any one kind of hay. The cost is less than hay. The milk-pail, wool clip, fattening steer, work-horse and growing stock all testify that this mixed feed gives better results than the old stand-by, 'corn and hay.' I advise farmers to study up and investigate this subject, and see if it won't pay them to do as many of our Western farmers are doing—give one third of their land to these crops."

Prickly Lettuce.—D. W., Fayette, N. Y., writes: "Farmers hereabouts are very apprehensive about the spread of a new weed called 'wild lettuce.' It comes up freely in grass-fields, and when these have been mowed it sprouts out again. It seems to propagate both by root and seed. It seems impossible to kill it by mowing, and pulling out is a difficult task. Can you tell us how to get rid of it? It is believed that it came here from the West in grass-seed, which is largely sown here of Western production, timothy and clover. Will the seed remain in the ground until next year if it ripens, and will plowing a field which has it in aid in subduing it?"

REPLY:—Prickly lettuce is an annual. It is not propagated by root-stalks, but by seed, which it produces in abundance. In some places it has become troublesome in meadows and permanent pastures. It spreads rapidly, but has not proved to be as bad as feared. Sheep will eat the young plants and keep it down in pastures that cannot be cultivated. Thorough cultivation in hoed crops, like corn, potatoes, etc., will subdue it. Prevention from seeding by repeated mowings will prevent its spread. Plants with ripening seed should be mowed and burned, not plowed under, to fill the soil with seeds that will be dormant for years, but ready to grow when conditions are favorable. Prickly lettuce blooms from July until frost, so mowing must be repeated until time for maturing seed is past; and close watch must be kept on the shorter stalks of the second and third growth.

VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to Dr. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

Fore Legs Versus Hind Legs.—R. A. M., Millersburg, Ky. In pulling a load all four legs of a horse are needed, but the hind legs furnish most of the propelling power.

Looks Like a Fistula.—J. W. L., Clear Springs, Mo. If all the information you can give me is contained in the statement that your mare has "a swelling at the point of her shoulder-blades that looks like a fistula," the only advice I can give you is to have her examined and treated by a veterinarian. What looks to you like a "fistula" may not be a fistula at all.

Calves Born Dead.—A. H., Marcus, Iowa. If the calves of your cows were born dead, notwithstanding that they had been carried the full length of time, there is very likely something radically wrong with the diet or the keeping of the cows. As a rule a still-born fetus was already diseased before birth. As you do not say anything concerning the feed your cows receive, and the sanitary conditions under which they are kept, and intimate that the cows themselves are healthy, I cannot give you any further information.

An Offensive Discharge from the Nose.—M. E., Hosmer, S. D. You say the now offensive discharge from the nose of your horse was first (in July) slight and bloody, then of a greenish cast, and is now yellow and is gradually getting worse (more copious) and offensive. Although good veterinarians may as yet be few and far between in South Dakota, and although an offensive (or fetid-smelling) discharge from the nose is not characteristic of glanders, except perhaps in a much-advanced stage of that disease, your case, it seems to me, requires a thorough examination by a competent veterinarian.

Disturbed Digestion.—G. M. C., Wampsville, N. Y. The attacks of your calf, manifesting themselves by bloating, temporary stiffness and a rolling of the eyes, are undoubtedly caused much more by eating unsuitable food or food possessing a great tendency to ferment, and thus disturbing the digestion, than by anything else. Changes in the weather, such as you state took place, naturally favor the production of such food, particularly in stubble-fields. Removing the cause constitutes the remedy.

Weak Cows.—J. B. R., Waverly, Ala. Your communication does not contain anything pointing to any possible cause of the weakness of your four cows, unless it was hot weather, an insufficiency of nutritious food and too heavy a drain on the resources of these young cows (you call them heifers), which probably had their first calf, and, according to your statements, were compelled to nurse not only their own, but each of them also another calf older than their own. This, it seems, was more than they could stand under the circumstances.

Dry Sores.—B. W., Jonesburg, Mo. What you call dry sores are probably small sores which soon dry up. If such is the case, and the animal shows some itching sensation where the sores or pimples are on the shoulders, keep the horse on a somewhat lighter diet, wash the shoulders first with soap and water and then with a three or four per cent solution of creolin in water; repeat the last wash daily for a few days in succession, and make it a point never to rub and scratch the shoulder nor any other part of the animal with the currycomb, but to use a good brush when grooming, and then remove with the brush every particle of dirt, and use the currycomb only to remove the dirt from the brush.

Had Distemper.—D. B. C., Findlay, Ohio. If your horse had distemper, but has not yet fully recovered, coughs some and has discharges from the nose, and you do not wish to have the same examined and treated by a veterinarian, exempt him from all kinds of work, keep him in a clean, well-ventilated stable free from drafts, give pure water to drink, and feed wholesome food easy of digestion, including, perhaps, some carrots, and twice or three times a week a good bran mash. If with this treatment the morbid symptoms do not decrease and gradually disappear you will have to call on a veterinarian to examine the horse and to take him in treatment.

Trots Dog-fashion.—F. S. R., Stony Point, N. Y. What you describe, the slightly sideways trotting of your horse when hitched up, or his trotting like a dog, may possibly be due to different causes: for instance, an objectionable bit, or, if the horse does it when driven double, a considerable difference in the length of the inner and outer lines, pain in one side of the mouth, a defective innervation in certain motory muscles on one side of the body, etc.; but most likely it is nothing more nor less than a bad habit. It might be interesting to see how the horse will act if driven double, first on one side and then on the other side of the pole, because if he then sidles on one side to the right and on the other side to the left some of the above causes would be eliminated.

Infections, or Epizootic, Ophthalmia.—H. H. S., Oakford, Ohio. What you inquire about appears to be infectious ophthalmia, or ceratitis, of cattle, a disease which as a rule will terminate in recovery and final restoration of the eyesight, except in such cases in which the cornea has become perforated by abscess formation or ulceration, for in them the eyesight will be destroyed. Keep the affected cattle in a darkened, clean, dry and well-ventilated stable in which they are neither crowded nor exposed to drafts, and apply to the diseased eyes twice a day by means of a so-called dropper (to be obtained in every drug-store) as an eye-water either a four-per-cent (four-per-mille) solution of corrosive sublimate in distilled water, or a seven-per-cent (seven-per-mille) solution of nitrate of silver in distilled water until the opacity of the cornea begins to disappear. That in your case the right eye is attacked first and the left afterward can be nothing but accidental, at least not borne out by other observations.

Foot Disease.—C. H., West Fairfield, Pa. The simple statement that your cows suffer from a foot disease does not enable me to give you any more than a few general directions. First, keep your affected cows on a dry and clean floor in a stable, and do not allow them to run out and walk about in stubble-fields, in muddy places and on rough and uneven ground. Secondly, if there is anywhere some loose or separated horn, cut it away with a sharp hoof-knife, because such horn if allowed to remain will interfere with the process of healing. Thirdly, dress all sore places twice a day with a mild antiseptic, and if necessary protect them by means of bandages. If the sores have their seat in the cleft of the foot, you may saturate some absorbent cotton with a mixture composed of liquid salicylate of lead, one part, and olive-oil, three parts, and press the cotton thus prepared in such a way into the cleft that it will be in intimate contact with the sores. If this is done twice a day a healing will soon be effected.

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THE GRANGE

Conducted by MRS. MARY E. LEE, New
Plymouth, Ohio

THE most arduous and responsible office in the grange is that of lecturer. Upon that important office rests the responsibility of filling each meeting with a well-prepared program. He must have the tact to bring out the best thought of the individual members, and to lead the members into new channels of thought. He is to the grange what a teacher is to a school. He assigns the lessons, gives works of reference to read, and conducts the rendition of the exercises. A wise, tactful lecturer, recognizing that he is not omnipotent and all-wise, will occasionally ask some member especially intelligent on some particular theme to conduct the discussion on that subject. It will lessen his work and give him time to make better preparation on the subjects he is interested in. He should be able and ready to answer inquiries, or, better still, direct inquiries to some source of information. Here is where a well-equipped library becomes an essential feature. Indeed, without it all discussions are apt to become stereotyped.

The lecturer should be a constant student. Mathews, in "Getting On in the World," aptly voices the idea we would convey. He says: "No field, however rich its soil, will bear continual cropping. It has been justly said that Aaron's beard would not have come down to us in history if he had but shown the Israelites what he could shave from his chin day by day; and even an Emerson would be unrecognizably diluted if he were trickled through a daily editorial. There is no mental reservoir of such capacity that it will not be empty at last if we perpetually draw from it and never pour into it. Besides, we must remember that, as the country parson has told us, the mind can be emptied in a much shorter time than it is possible to fill it. It fills through an infinity of little tubes, many so small as to act by capillary attraction; but in writing a book, an article or a sermon it empties itself through a twelve-inch pipe. When old Dr. Belamy was asked by a young clergyman for advice about the composition of his sermons he replied, 'Fill up the cask! Fill up the cask! Fill up the cask! And then if you tap it anywhere you will get a good stream. But if you put in but little it will dribble, dribble, dribble, and you must tap, tap, tap, and then you get but a small stream after all.'"

No child that has read Hawthorne's "Wonder Tales" will content himself with one reading. Those magical myths of old-time heroes, gods and demigods will appeal to the child's imagination, and who knows but incite in him a love for research. The only trouble about "Wonder Tales" is that if there are many adults in the house the poor child will have a hard time in getting to read it. Oliver Wendell Holmes has whetted my curiosity for "Eyes and No Eyes," a story found in "Evenings at Home." He says: "This is the story as I remember it: Two children walk out, and are questioned when they come home. One has found nothing to observe, nothing to admire, nothing to describe, nothing to ask questions about; the other has found everywhere objects of curiosity and interest." I advise you, if you are a child anywhere under forty-five, and do not yet wear glasses, to send at once for "Evenings at Home" and read that story. For myself, I am always grateful to the writer of it for calling my attention to common things. How many people have been awakened to a quicker consciousness of life by Wordsworth's simple lines about the daffodils and what he says of the thoughts suggested to him by "the meanest flower that blows." Dr. Holmes gives us such a recommendation it is worth our while to read it.

It makes very little difference which party is in power so long as the people are alert and determined that justice shall be done to all classes. It is very silly to get so heated in a cam-

paign that we say and do all sorts of ridiculous and contemptible things to get a set of men in office, and then consider our duty done. It is one thing to elect a man. Usually the campaign managers are plentifully supplied with the wherewithal. It is quite another thing to make him see his duty through the medium of his eyes rather than his pocketbook after he is elected. If people would spend one fourth the energy in the interim between two presidential campaigns that they consume in the two months preceding an election, in commanding obedience to the dictates of reason and justice in the administering of public affairs there would be far less of lawlessness and disorder, of bloodshed, of scandals in high and low places. There would result better schools, because politicians would be compelled either to keep their hands off or give the patrons so good service that they would find it to their interest not to complain.

Below is a quotation from a manifesto that many will talk about, while having precious little knowledge of the instrument in question. How many can tell where it is found? Read it in your grange, and ask all who can tell where it is found to hold up their hands. No matter if you don't know yourself, some one else may be able to help you find out. Try this, and report results:

"Prudence, indeed, will dictate that governments long established should not be changed for light and transient causes; and, accordingly, all experience hath shown that mankind are more disposed to suffer, while evils are sufferable, than to right themselves by abolishing the forms to which they are accustomed. But when a long train of abuses and usurpations, pursuing invariably the same object, evinces a design to reduce them under absolute despotism, it is their right, it is their duty, to throw off such government and to provide new guards for their future security."

"Good friends, sweet friends, lend me your ears." We are fairly patient, have the average bump of generosity, and are anxious to help you in any way we can, but don't, we beg of you, forget to inclose a stamp when a personal answer is expected. The two cents mean very little to you, but multiply it many fold and it becomes a serious burden to us.

THE FARM-LABOR PROBLEM

One of the most vexing problems the farmer has to solve is the labor question. The drift of Eastern population to the city and the great West has left in its trail a question upon the right solution of which depends much of the future welfare of the farmer. From every section of the country goes up the cry for more help. Farmers are becoming more intelligent as to the care of their farms, the harvesting of their crops, the feeding of their stock. But the increased intelligence has not brought the skilled labor to carry into effect the intelligent efforts of the land-owner. Machinery has indeed played an important part; but even machinery must be operated by men. Then there is a certain amount of labor that must be done by hand. While knowledge of the need increases, the means to the accomplishment of the end in view diminishes.

It would seem that with our cities congested with idle men and women, with the omnipresent tramp and his twin brother, the idle corner-grocery loafer, that the supply would far exceed the demand. Such is not the case. So prevalent is the demand for farm-laborers that one may greet a brother farmer with the remark, "No, I do not know of any good hand at present. If I did I would get him myself!" He will understand you, for the question he meant to ask you when he grasped you so eagerly by the hand was, "Do you know where I can get a good hand?" The causes and the remedy for this condition of affairs would make an excellent topic for more than one discussion at your grange this winter. And when we come to look into the matter deeply we will be surprised to see where

the question, comparatively simple in itself, leads. It is one of the fundamental principles of our success or of our failure as farmers.

A family that has spent years in building and beautifying a home does not want to see it go into the hands of strangers, or rent it and move to town. There are tender associations connected with every tree and shrub and vine. Even the cattle and horses assume personal relations to those who have cared for them so many years. Yet if labor cannot be gotten the removal must take place. It would seem, however, that the American farmer, with his pluck, shrewdness and ingenuity, would make this necessity the mother to an invention that would either largely do away with the need of so much labor or supply the labor. Many farmers will succumb to the inevitable, abandon their present method of farming, stock their farms with sheep, and buy a great deal of the concentrates for feeding. Some farmers will make a glowing success of this method, others a dismal failure. Much depends on the man. Possibly some of the more intelligent and progressive will in a small way begin a system of co-operation that will be wide-spread in its results. Sensible co-operation that will take human nature as it is—not as it ought to be, or might be, but simply as it is—will be the true solution in many neighborhoods. Farmers are practicing it in a small way now in their co-operative creameries, canning-establishments, insurance companies, and in buying and selling. The success of the initial undertakings leads one to hope for greater developments along this line.

The intelligent farmer asks, Why is this dearth of farm labor? Judging by the stories the workers themselves tell of their hardships and deprivations of their small wage, and the discrimination in favor of favored ones, of the company store and its enormous profits, one would think the situation of the farm-laborers a happy one indeed compared with these others. Many claim that they cannot earn fifty cents a day, yet they laugh to scorn the farmer who would offer them fifty cents a day and board. This is not a matter to fret or whine over, as many seem inclined to do, but to earnestly ponder and seek a reason therefor. Having found the reason the remedy will be easy to apply. One fact is potent to all—laborers as a rule seek the city or town. Apparently they are unable to find within themselves the means of enjoyment, but must depend on the companionship of their social equals for what happiness they have. Again there are fixed hours of labor in works of a public character. The man or woman knows to a certainty just what constitutes a day's labor. These may be some of the reasons that farm labor is scarce. Another is that idleness is not frowned upon as it should be. When the society of rural villages and communities refuses to recognize the idle loafer as a social quantity, when loafing becomes a brand of disgrace as indelible as that of theft, then will there be a fair-sized army of non-producers converted into producers. A strong, healthy public sentiment against any evil will do much toward counteracting that abuse.

Several farmers in our community are making the experiment of getting boys from the reform farm. They are meeting with indifferent success. The boys are untrustworthy, they say. Of course, these boys cost only their board and clothes. To us it would seem far better to leave these wards of the state at the reform institution and trust to the management to show them the evil of their ways and develop within them ideas of good citizenship. We would far rather secure for the summer vacation some willing student, pay him good wages, and have the advantage of new ideas and intelligent companionship. There are many students in our colleges who would gladly embrace an opportunity to go to the country and earn a good wage during vacation. Such an arrangement would result in mutual good to all concerned.

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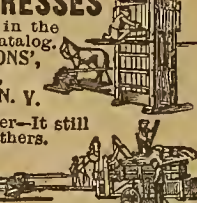


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ALL HALLOWE'EN GAMES

By Adele K. Johnson

MYSTERIOUS and strange are the rites practised at Hallow-tide. Various are the manners of observing the festivities—on the main floor of the house, in the attic, in the garden, and in a new stable. But at the most novel of all the entertainments last year the cellar was the scene of the "tried and true tests."

The effect was delightfully weird, ghostly and fascinating. Grotesque pumpkin Jack-o'-lanterns were artistically carved into "wild, ugly faces," as Whittier so aptly describes them. Rusty horseshoes and large gilt wishbones (turkeys) were very prominently displayed. Great piles of apples and baskets heaped high with nuts were festively arranged.

The hostess had issued illuminated invitations (these were delivered one evening)—huge Jack-o'-lanterns; on the faces the words

Hallowe'en
Mrs. Hall
Come

were distinctly visible.

The little letters which are used in the kindergartens (all bakers sell them) were that evening devoted to another purpose. We dropped a handful into a bowl of water. After stirring the water the first letter to rise "will be the initial of the future husband or wife."

A maid and a man blindfolded each selected a chestnut. These were placed side by side upon the coals. The manner of their roasting is symbolical of the owners' future life. When they roast tranquilly together, then happiness; if they sputter and fly apart, a quarrel and estrangement will positively occur before the engagement-days are over.

Mixed nuts were served, and the guests were as busy and happy as little squirrels, when the hostess exclaimed, "Pray, look to your fortunes, young people! These are not simply nuts!"

"Does not a chestnut mean no home?" inquired one.

"Yes; you'll live in a trunk and travel over land and sea."

"The almond signifies wealth, the peanut a spinster or bachelor, and the butternuts are fillers. A walnut is best of all," continued Mrs. Hall. "Success, you will scale the heights to victory."

We observed the ancient custom of serving the wassail in a huge wassail-bowl. Rich, sweet cream, sugar, baked pears, quinces and apples (the fruit cut into eighths), small pieces of lemon-peel and spices form this attractive compound. Each guest had a portion, then proceeded to analyze its contents. The fruit is lucky, and brings all desirable things. In the fortune-telling the spice is not as delicious as in ordinary cookery—rather an unfortunate omen.

Roasting apples before the fire was entertaining. When the apple cooks beautifully and perfectly life will be a long summer dream. When it "dries and scorches" that foretells dire disaster.

The test of pulling cabbages was tried in the good old way, with this addition, that when the head is "a close white one an old man is the destined husband; but if an open green one, then a young lover may be hoped for."

The maidens as of old sought in the looking-glass a vision of the future husband. It sometimes happens that the face of the Evil One is visible instead; at least so reads the ancient tale.

One of Mrs. Hall's novelties was to hang up a sheet or two. Then openings no larger than a girl's eyes were cut in pairs at the right height. All the girls standing in a row behind the sheet will be entirely concealed with the exception of their eyes. The men chose their own fortunes by selecting the pair of eyes they preferred.

The sweet-faced, quaintly gowned handmaidens served olive sandwiches, cucumber (pickles) sandwiches, nut salad attractively arranged on grape-

leaves, salted peanuts, apple turnovers, pumpkin pie, baked apples and rich cream, apple and quince preserves, nut cookies, "fairy, or angel," cake, fruit and nuts.

Three novelties appeared on the festive board—small barley-cakes (after an ancient receipt), doughnuts (horseshoes), and small cakes heart-shaped style, richly iced and ornamented with tiny stars, miniature moons or small daisies. These cakes were arranged on a large tray; the guests read their fate therein, for a symbol was baked in each—a heart for love, a cent for wealth, a piece of Chinese money for a missionary, a ring for marriage; a red, white and blue piece of candy signified either a soldier or a soldier's bride, a four-leaved clover good luck, a doll's cup a housewife, a pebble a wanderer, a thimble a bachelor or spinster, a key success, a pen a journalist.

PICOT-EDGE LACE, EASY

Make a ch of 12 st.

First row—1 tr c in third st of ch, ch 1, 1 d c, 1 tr c, ch 2, 1 tr c, 1 d c all in fifth st of ch, ch 1, 1 d c, 1 tr c, ch 2, 1 tr c, 1 d c all in seventh st of ch, ch 1, 1 d c, 1 tr c, ch 2, 1 tr c, 1 d c all in ninth st of ch.

Second row—Ch 2, sh in sh, ch 1, sh in next sh, ch 1, sh in third sh, ch 1, 1 tr c in tr c.

Third row—Ch 3, tr c in tr c, ch 1, sh in sh, ch 1, sh in next sh, ch 1, sh in third sh, ch 1, 1 tr c in tr c.

Fourth row—Sh in sh, ch 1, sh in next sh, ch 1, sh in third sh, ch 1, 1 tr c in tr c.

Fifth row—Ch 3, tr c in tr c, ch 1, sh in sh, ch 1, sh in next sh, ch 1, sh in third st, ch 1. * 1 tr c in ch 5 of third row, ch 1; repeat from * nine more times.

Sixth row—Ch 2, * 2 tr c in ch 1, ch 2, repeat from * eight more times, ch 1, sh in sh, ch 1, sh in next sh, ch 1, sh in third sh, ch 1, tr c in tr c.

Seventh row—Ch 3, tr c in tr c, ch 1, sh in sh, ch 1, sh in next sh, ch 1, sh in third sh, ch 1, * 3 d c in ch 2 of sixth row, ch 1; repeat from * seven more times.

Eighth row—Fasten with sl st to first row, * ch 5, 1 s c in ch 1, repeat from * eight more times, ch 1, sh in sh, ch 1, sh in next sh, ch 1, sh in third sh, ch 1, tr c in tr c.

Ninth row—Ch 3, tr c in tr c, ch 1, sh in sh, ch 1, sh in next sh, ch 1, sh in third sh, * ch 5, 1 s c in ch 5 of eighth row; repeat from * eight more times.

Tenth row—* ch 7, 1 s c in fifth st of ch 7, to form a picot, 1 s c in ch 5 of ninth row; repeat from * eight more times.

Repeat from second row, always fastening the ends of the scallop rows to preceding rows that allow of the work laying smoothly. EMMA CLEARWATER.

FROM THE KITCHEN

The thoroughly well-equipped kitchen is the exception rather than the rule, whereas the exact contrary should be the universal state of affairs, and the housewife's ambitions an allowed pleasure-reality.

The home workshop of the writer—that is, the kitchen workshop, for there is yet another, where the desk and type-writer play an important part—furnishes one of the happy diversions in life, and one of the pleasant duties in labor lines. For better than to be anything else in all the world is it to be a good housewife and home-maker, and a good cook of tempting and appetizing dishes for home-folk.

When the weather is not so extremely

warm that there exists no semblance of comfort anywhere it becomes an absolute pleasure to start a brisk fire in the great steel range and then to prepare articles for the oven too numerous to mention and to bake them. For everything that goes into that oven comes out superbly satisfactory, from bread of whole-wheat flour to Graham and white loaves, and from pies to cakes, puddings and cookies, and whatever else may be consigned to its timely keeping for a space of ten minutes, more or less. As I work contentedly away my thoughts go out to housewives everywhere, and especially to farm housewives, and I wish for them all, always and ever, a well-equipped laboratory where the economic problems of their days of kitchen toil may be made inspiring and encouraging, and so resultful in all ways enjoyable. Nothing can so add to the comfort of the cook's days in her workshop as a stove that will do perfect work, instead of the indifferent returns that thousands of cook-stoves are daily doing for the mistress who strives so hard to have everything come out right.

Is it to be wondered that a woman lost all interest in her cookery and grew discouraged when her worn-out stove refused to do good baking, and her husband declared her bread and cakes were a blank failure, and who yet maintained, when told why, "that no matter, he just couldn't afford to put in a new stove yet awhile, and, moreover, that he would not?"

This same housewife was an enviable bread-maker. But when the entirely worn-out and never first-class stove could no longer be compelled to turn out even half-way good baking, could she help it that her loaves grew sodden and black and coarse-grained in the process of oven raising and baking? At the slightest jarring, even to walking across the floor, the damper would fall. And that damper could not be put in right position again until the stove-pipe was removed from the stove, the hand slipped down and the burned-out plate of the damper iron readjusted.



Is it strange that women sometimes grow so tired of their lives? But we try to believe that few kitchens are so sadly neglected as to furnishings and conveniences, and we try to believe that the majority of housewives are good cooks, and interested, "sonful ones."

For summer work the gasolene-stove has proven a boon and an untold comfort to housekeepers and cooks. We can bake and boil and fry and broil with the aid of such a summer innovation, and we have used such gasolene-stoves for more than sixteen years. But the kitchens and kitchens we find to-day where such a stove has never been introduced! Equally rare in numbers are the beautiful and perfect steel ranges of to-day that make a woman's kitchen labor a joy. They are somewhat an expensive luxury, yet an article of furniture that once purchased will last a good long lifetime, and always do perfect work, to the entire satisfaction of the concocter of dishes simple and rare, is cheap and inexpensive.

Farm fuel where corn grows is always in abundance, and corn grows almost everywhere. Who would ask for wood or coal when cobs can be obtained? Assuredly not I. Corn-cobs make a quick fire, a hot fire, and a fire soon out when it is no longer wanted. Then the kitchen soon cools and there is no troublesome black soot and smut to make cooking-utensils, cupboard, dishes, woodwork and hands and face grimy. Cobs are the universal fuel of the West, though coal and wood can be had in abundance by paying for them. But cobs seem to come to the

farmer without money and without price, though this, to be sure, is not absolutely true. Cobs will bring a price when marketed. But the farmer's fuel-pile is seldom low, and he never dreams of the expense of it.

Village and city brides who have come to the farm to help build a home nest with brave, whole-souled farmer boys have been known to take unkindly to farm fuel when it came in the form of cob-piles. I was once upon a time one of them, and many a flood of tears was foolishly expended over what seemed a problem, but was in reality no knotty problem at all. I shall never forget the day that, discouraged and perpetually "blue" over the trial of a fire always out, and a young housewife to blame for it, because she forgot continually, I was found sitting on the ground back of a hay-stack weeping as though I had really something to weep about. Kind and loving words soothed the wound, and I was assured that of coal I should have all the tons I wanted if I said so. In reality I did not want the coal. I simply wanted that my fire should not be always out, and that I should be growing wise enough to think and plan better and to be better able to make the best of surroundings and circumstances. Coal was expensive compared with the fuel that cost practically nothing at all. Coal was dirty, smutty stuff to handle, and made the work of the kitchen additionally burdensome. Years ago the conclusion was reached that of fuel nothing could compare with a bottomless cob-pile for dry-weather use, and a well-filled house of cobs for wet-weather purposes. With a perfect steel range and a gasolene-stove of undisputed superiority, a large, always-filled can of gasolene, and cobs in plenty, a housewife is ideally equipped for kitchen housekeeping, provided she is sufficiently supplied with cooking-utensils and articles of food materials to convert into palatable forms.

But again. Though with no need or want unsupplied, how frequently we find among our feminine friends women so incapable, indifferent and careless that "the good things to eat," so dear to a man's heart, are always lacking, while in their place are the indigestibles and unpalatables that are simply endurable because unavoidable.

"I always enjoy your custards and custard pies so much," said a farmer who frequently dined with a neighbor whose wife was acknowledged a good cook. "They are always so creamy, baked or made to a turn. Your bread, also, I believe, is the finest I ever ate anywhere." At home the custards and custard pies served were always curdled, watery and unfit for food.

"Charlie likes custards best that are cooked until they curdle," she has been heard to say. Mayhap Charlie told her so "for peace in the family." But Charlie told a different story away from home, though never was he known to say a word against his wife or her management. But he missed daily the "better fare" he enjoyed when away from home. Is it not a pity, then, that women shall fail as housewives, home-makers and cooks?

This little neighbor known to me "just loved fancy-work," and her home was decorated with cheap, tawdry, undesirable nothings that took her time and prevented her becoming master of her household. But her table never presented an inviting appearance. She loved "love-stories," too, and cheap, instead of really helpful, literature was her preference, and it was the style of literature with which her mind was principally stored. Could she have just been interested in her own love-story—the story that might have been hers—of home love and appreciation, instead of so solely absorbed in the many trashy love-stories that came to her in printed form, and again absorbed in the crochet patterns of lace and the zephyr-work and hair-flowers and other very doubtful articles of ornamentation, Charlie would not have needed to eat curdled custards and sour, unpalatable bread, ruined cakes and all manner of other hurriedly and carelessly prepared viands. No wonder Charlie was a dyspeptic. Not strange, I sometimes think, that there are so many dyspeptics, but truly strange there are not more.

ELLA HOUGHTON.

THREE POINTS OF VIEW

When a modern maiden marries
In delightful dreams she taries,
As her fancy surely shifts
To the thought of wedding gifts.
"Every friend who would be pleasant
Must," she muses, "send a present;
All acquaintances must pay
Tax upon my marriage-day.
Fans and furs and rare old laces,
Gold-embellished dressing-cases,
Rings and brooches, silver mugs,
Entree-dishes, claret-jugs—
Tables will with these be laden
When I marry," gloats the maiden.

When a modern coelebs marries
In his heart grim fear he carries.
"With," thinks he, "our income small,
We don't want such gifts at all.
There's that grand piano—gracious!
That involves a house more spacious;
Then that dressing-hag, alas!
That can only go first-class;
Silver center-dish and cup, too,
How can we such things live up to?
Every present of pretense
Means for me increased expense.
Would that I such gifts could have
When I marry," thinks the man.

When a man and maiden marry
Hearts of lead their friends all carry;
Custom, as they know, demands
Costly presents at their hands;
Ostentation, too, coerces,
So they empty out their purses,
Fearful lest their names be missed
From the always published list.
But in private in a passion
They denounce the sordid fashion,
Crying, in most bitter strain,
"Only fancy, fleeced again!
Bah! 'tis an event to dread
When a man and maiden wed."
—London Truth.

A HALLOWE'EN NUT-CRACK AND PUMPKIN PARTY

WHEN the thirty-first of October arrives there is to be a merry gathering of young people at the home of a bright maiden, who has already made her plans for the festive occasion. She is going to ask only eight couples, as the dining-room where the jollification is to take place can accommodate that number and no more.

Cards cut and colored to resemble pumpkins, the invitations printed in green in quaint lettering, and a slip of paper bearing the request that each bring a Jack-o'-lantern of their own handiwork, are to be inclosed in envelopes deftly decorated with nuts painted in water-colors.

On the eventful night there will be no other light than the blazing, fitful flames from wood burning in a big fireplace, and from Jack-o'-lanterns suspended from the center of the room in chandelier form. The walls, which are to be lavishly festooned with nuts and ropes of evergreens, will doubtless make a pleasing background for the Jack-o'-lanterns the guests are to bring with them, and which are to be hung about the room.

Small tables holding pitchers of cider, half pumpkins piled with fruit, and gilded cocoanut-shells filled with nuts are to furnish the refreshments.

If all the plans made are carried out surely fun and frolic will hold sway from the beginning to the end of the evening. In the first place, faucifully decorated pumpkin pies are to be presented to the young man and young woman who bring the most grotesque Jack-o'-lanterns. The judges, who have already been appointed, think they have a difficult task ahead of them, for, of course, all will declare their own the most skilfully made, and they feel sure that the winners will have to divide the pie in order to satisfy the unlucky ones.

Later all will be seated around the fireplace in a semicircle, and play the jolliest kinds of games, in charge of a younger sister of the hostess, who will be arrayed in gipsy attire and act as "mistress of ceremonies." She has a great deal of ready wit, and has made a study of palmistry, so she is going to devote some of the evening to telling fortunes and reading hands.

There are to be "nut" surprises, the company in turn taking from a basket a silvered or gilded nut and finding inside instead of the nut-meat extremely witty fortune rhymes. This is to be followed by a contest, to see who can crack the most nuts in ten minutes. The most successful man or woman is to be presented with not only all the nuts that are cracked, but also a nut-cracker.

After this cards with pencils attached will be passed and a request made that each person make as many words as possible from the words "pumpkin Jack-o'-lantern." The one making the longest list is to be presented with a basket of roses.

In another pencil-and-paper game the guests will be expected to write their names at the top of a paper, fold over and place in a box provided for the purpose. When all have done so they will be redistributed and a character written, folded and returned to the box; this will be done until past, present and future are written, when the papers will be collected and read aloud by the hostess. It is easy to imagine that there will be some laughable fortunes read.

A game which will be loads of fun is called "the hammer-and-nail contest." The young men are to have a tray containing twenty needles—part fine and part coarse—and a spool of thread No. 50. For the women will be a block of wood and as many tacks as the men have needles. The men try to see who can thread the most needles in five minutes, every needle having to be placed on a separate thread and knotted each time. While the lads are doing this the lassies will drive as many nails as possible. There are to be two prizes, consisting of bonbon-boxes filled with delicious candy.

As the fire dies down those who wish can try Hallowe'en charms by means of apples, nuts and corn. And as an evening like this must have a "fortune cake," the hostess has already ordered one made exactly suited to the night. There are to be a number of small square boxes filled with tiny candies, and the outside covered with paper simulating frosting, and so fitted together as to look like a square cake. Into every box will be either a ring, dime, needle, thimble or button. The one who gets the ring is soon to wed; the thimble means celibacy, the dime legacy, the needle spinster, the button bachelor.

Ghost stories, dancing, and the singing of college songs will terminate the festivities. As a souvenir of the delightful evening each will carry home a yellow pumpkin pincushion.

RUTH VIRGINIA SACKETT.

BREAKING IN A COLT

If you have ever seen a little colt running after his mother in the meadows you know how very funny he looks. He has long legs that seem very crooked and uncertain, for they point in all four directions at once. He has no mane to speak of, and only a stubby little tail. His coat is very rough, for he has never been rubbed down with a brush, and though you might look at him a great many times, you would never believe that he could grow into such a big, strong, handsome horse as his owner tells you that he will become some day.

The most important day in a colt's life is when he first learns to carry a burden upon his back. A small laprobe is strapped upon him, and he is let loose, to tear up and down the fields and shake it off if he can. Then a double blanket is strapped across him like a saddle, and after awhile he can bear the weight of the saddle itself, and then the weight of a boy. Shoeing him is very troublesome, for he often refuses to walk after it, and will roll around on his back, holding his feet up in the air in the most pitiful way, as if he did not know what to do with his new shoes. Teaching him to "back" is accomplished by hitching a team to the back of the wagon to which Mr. Colt is harnessed. At the word "back" some one starts up the team from behind and Mr. Colt is "backed" until he learns the use of the word. His training is not very pleasant for him. But if he is a bright, intelligent horse he will learn all there is to learn within a year after he has got his growth, or by the time he is three years old. He will then be very frisky and inclined to be scared at trifles. But if he is shown just what they are he usually changes his mind and behaves in a sensible way. Training a colt is easier than training any other animal, because the horse is naturally the most intelligent of all dumb animals.

SHALL OUR YOUNG PEOPLE READ FICTION

Fiction is to the student what play is to the child. The one is as necessary as the other; elevating, pure fiction aids in the assimilation of heavier literature. It is not enough for a young person to have an accumulation of facts in the mind. It is possible to have them stored away so completely that they are of no use to any one. But if one reads good fiction judiciously his imagination will be stirred, his vocabulary will be enlarged, his thoughts will fly to a higher level, and all these hitherto unused facts will be brought into use. He will see the beauties of figures of speech, and be able to make them his own. His mind will be the better able to grapple with mathematics, to delve into the intricacies of science, master history and grasp the ideas of philosophy if he has allowed his powers to become refreshed by spending some time with the "best authors."

Much depends upon the manner of reading fiction. Some read it solely for the purpose of getting the end of the story. Too often it is the love affair that is found to be the key-note of the book, and not the character-sketches and nature-study. Many books are so full of original ideas marvelously expressed that it is a shame to give them but a cursory reading. In fact, many a gem of thought will be lost unless the book be read the second time.

As a rule the better worth while the story the more it requires of the reader in the way of severe attention. One book completely mastered is worth more to you than a dozen books skimmed over. Washington had but few books, yet he knew what was in them. Lincoln had fewer books than Washington, but he was complete master of all of them. Both of these men were in the habit of rewriting chapters in their own language and with the books closed. Nothing is more helpful. Take George Eliot's "Middlemarch," for instance. Read it chapter by chapter, analyze what you have read, and then write it down as it appears to you. You will be surprised at the fullness and richness of the book.

Scott's "Ivanhoe," Victor Hugo's "Les Miserables," Thackeray's "Vanity Fair," Dickens' "David Copperfield" or "Dombey and Son," Meredith's "Harry Richmond," Eber's "Uarda," or any other intensely dramatic or deeply philosophical novel, demands thoughtful attention, and must receive it to yield up its stores of wealth.

"All novels of Scottish life, be they in lowland or highland, by wild purple moor or singing burn, are wholesome, pure and clean as the wind that sweeps the mountain peak, and their reading will make you long to worthier bear your part in the struggle and the strife of the market and the battle-field." The Waverley novels are not slow and tiresome, as so many of our young people think. Make a study of them and you will enjoy them more thoroughly and they will do you much more good than many of the late popular novels. How delightfully does Barrie show you "The Little Minister." You feel that you know him personally, and rejoice in the acquaintance. And, ah! how you will lose your heart to Ian Maclaren's "Margaret Howe" as you read "Beside the Bonnie Brier Bush."

Many a young man or woman has had to abandon his life's dream—the thought of a college education—yet he has made such good use of his time, has read so wisely and well, that he may be called a well-educated man. One determined upon being educated need never despair of realizing his ideal. The person who reads daily and according to some prearranged plan, and not merely for amusement, cannot fail to become cultivated. Even if he can devote no more than fifteen minutes or half an hour to this reading he will be surprised at the end of a year at the progress he has made. With Nansen one may go to the fields and flocks of the "Farthest North;" with Williams and Griffith and Miss Bird and Adele Fields familiarize one's self with China and Japan; with Hurst and Thoburn traverse from Bombay to Calcutta, and with Livingston enter "Darkest Africa." Read those books which will make you more intelligent, broader, better and more useful in this beautiful world.

ELLA BARTLETT SIMMONS.

CONFEDERATE GOOD THINGS

SOFT GINGERBREAD.—One cupful of butter, one cupful of sugar, two cupfuls of molasses, one cupful of milk, four eggs, one teaspoonful of soda. Spice to taste, flour to make the consistency of pound-cake batter, and bake quickly in pans.

MOLASSES PIE.—Four eggs beaten separately, one teacupful of brown sugar, two tablespoonfuls of butter, half a nutmeg, one and one half cupfuls of molasses. Beat the butter and sugar well together, then the whites of the eggs, leaving out some for a meringue on top if desired. Bake quickly in a rich crust.

DRIED-APPLE AND MOLASSES CAKE.—One pint of dried apples cut fine, with the peeling of an orange or lemon soaked over night; then stir with one cupful of molasses and one cupful of sugar until tender. Make the batter of one quart of flour, four eggs, three cupfuls of sugar, one cupful of butter, one cupful of milk, two spoonfuls of baking-powder; season with half a nutmeg, one teaspoonful of mace, one half teaspoonful of cloves. To make it still more like fruit-cake use some cherries or currants with the apples. Bake as you do fruit-cake, but not quite so long.

MOLASSES CAKES WITHOUT EGGS.—One pint of molasses, one half pint of lard, one half cupful of brown sugar, one half tablespoonful of ginger, one tablespoonful of soda and one quart of flour. Bake quickly.

MOLASSES CANDY.—Take two cupfuls of molasses, one cupful of brown sugar, butter the size of an egg and one tablespoonful of vinegar. Boil; when done add one tablespoonful of saleratus; walnuts, also, can be added.

GINGER COOKIES.—One teacupful of molasses, one teacupful of butter, one half cupful of brown sugar, one half cupful of water, one tablespoonful of ginger and one tablespoonful of soda. Flour enough to roll thin. Bake quickly.
T. L. C.

DRAWING-ROOM MOSAICS

I have seen mosaic work in India that was most skilfully done, and the effect was remarkably pleasing. And often was it true that those formed of the bits of commoner stones, glass, marbles and buttons were really more beautiful in their effect, because they were arranged so artistically, than others composed of more costly materials, as precious stones, gems and alabaster.

The beauty of the figure when finished depended upon the manner in which the work was done, and the harmony which the various parts of the whole bore to each other. One stone imperfectly polished or out of proportion would spoil the effect of the picture as a whole.

And is it not just so in the furnishings of our rooms? Do we not often spoil the effect of the whole by one piece of furniture which is out of keeping with the rest?

A small room should never be made to contain large pieces of furniture, nor be papered with large-flowered wall-paper, nor be carpeted with carpet that had immense set figures or upholstery. It can never do itself justice if treated in this way. A better way to treat it would be to have the furniture uniform, the walls covered with wall-paper that has a small symmetrical figure of pleasing color, and to follow it out in the floor-covering.

Again, when the furniture is all that could be hoped for, neither too large nor too small, there is often too much of it. When this is the case no arrangement, however skilful, can impart the restful, homelike, at the same time artistic, effect so desirable. There must be space sufficient for each article to assert some individuality.

And, oh, in the name of all that is cheerful and inviting, do not allow the room to present a prim, precise appearance! Monotony is so unrestful. The old-time popular arrangement of placing the chairs neatly against the sides of the room I fear is not altogether obsolete yet.

Select furniture with a view to its comfort, convenience, beauty and adaptability, then arrange it in an easy, natural manner.

ELLA BARTLETT SIMMONS.



AN ALABAMA YANKEE

By Francis Lynde



THE UNDERGROUND RAILROAD

It was fully ten o'clock by Alan Joyce's timepiece—which was the tilt of the big dipper in the northern sky—and he was tiring of his vigil. The knobby surface of the sandstone table-rock upon which he was lying face down had become obtrusively hard, and he had long since made up his mind that Uuc' Ephraim was not coming.

The table-rock was on the cliff edge, and with the first-quarter moon at his back Alan could look down upon the wooded slopes of the mountain, across the valley, to where the Tennessee river lay like a silvered mirror in the moonlight, and still farther to the up-reared background of the Cumberlands. It was a view which one has to be mountain-horn to either appreciate or ignore. The cliff is in Alabama, but from his flat rock Alan could flip a pebble into Georgia or Tennessee.

Now, the flipping of pebbles is essentially a peaceful diversion, and on this August night, in the year eighteen hundred and sixty-three, peace had hidden her face and fled shrieking from the valley of the upper Tennessee. Wherefore the one item in the magnificent eye-sweep which stirred Alan was a line of yellow dots across the river—the camp-fires of the Federal army.

"Hurrah!" he shouted, softly, counting the dot-like camp-fires for the twentieth time. "Hurrah for our side! 'Twon't be long now till we can fly the dear old flag so everybody can see it—so old Jasper Garth can see it, and shake his fist at it if he dares!"

Alan's enthusiasm was not all of patriotism. There are no partisans quite as bitter as those who are in a hopeless minority; and the Joyces, father and sons, were unflinching Unionists in the very heart of secessia.

It was wholly a matter of principle with the stern old mountaineer farmer. He was Southern by birth, breeding and ancestry, but at the roll-call of the states he had stepped out boldly on the side of the Union.

The step had cost him dear. Social ostracism was the lightest of the penalties; and when it became noised about that he was helping runaway slaves there were threats of violence, and now and then persecutions at the hands of the lawless ones.

It was the helping of the runaways which breached the Joyce-Garth friendship. At first Jasper Garth, himself a Southern partizan of the fiercer sort, had stoutly defended the right of his old friend and neighbor to his own opinion. But he was a slave-holder, and when it leaked out that the Joyce house had become a station on the Underground Railroad, Garth planted an osage-orange hedge on his side of the line-fence, and took to staring fixedly at his horses' ears in passing. And after that the young people of both households—or all but two of them—went the long way around, to dodge each other.

A little later the war storm broke, and the breach widened. Young Richard Garth enlisted, and when he had won his captain's shoulder-straps in the Confederate cavalry Stephen Joyce's eldest had been given a lieutenancy in "the army of invasion" for bravery on the field of Perryville.

Alan was thinking of his brother while he was counting the distant camp-fires. Was Lieutenant Robert there, straining his eyes for a glimpse of his mountain birthplace? Alan thought it likely; and in anticipation saw his soldier-brother galloping along the cliff road on his home-coming.

The snapping of a twig in the blackness below his perch recalled him suddenly.

"Hi! Is that you, Eph?" he called down.

"Dat's me faw shab, Marse Alan," came the answer out of the blackness; and a minute later two men of the race in bondage—one bent and aged, and the other young and muscular—toiled up the steep cliff path.

Alan gave the younger man a passing glance of appraisal, as his father might. He was only sixteen, but war is a terrible ripener.

"What's your name?" he demanded. The question was curt only in form. The soft drawl of the Southland blunts all the edges of brevity.

"Pete, sah; Pete Crawford."

"You're the boy we're looking for—the runaway from Major Peyton's plantation on the Etowah?"

"Yes, sah; dat's me."

Alan turned to lead the way across the road.

"Fetch him along over to the house, Eph, and look sharp. The patrol hasn't been up this-away yet to-night."

They had crossed the road and Alan's hand was on the gate-latch when a muffled drumming of galloping hoofs on soft sand thrilled on the still night air. Alan heard it first, and in one motion snatched the gate open and thrust the two negroes into the orchard.

"Down! Down in the grass, quick!" he whispered; and ten seconds later a detach-

ment of Confederate cavalry thundered past in a sand-storm of its own raising.

The young negro's face showed gray in the moonlight when he rose, and Alan laughed.

"Scared you up, didn't it?" he said. "Come up to the house; father is waiting for you."

Like many Southern farm-houses the Joyce home had originally been two log pens with a roofed passage between. Thrift had added other rooms and covered the hewn logs with clapboards, but the great kitchen was still the family living-room. As Alan entered his father was preparing to read the evening lesson, and he motioned the two negroes to a seat on a settle, and took his place beside his sister.

It was the seventy-ninth Psalm that Stephen Joyce read, as one of his Covenanting ancestors might have read in the days when Claverhouse was dragooning the Scottish marches. "O God, the heathen are come into thine inheritance; thy holy temple have they defiled, and made Jerusalem a heap of stones."

Alan listened with kindling enthusiasm. He was a loyal son, and at such times he thought the world held no graver figure than his.

to risk your life and mine trying to run the lines. You are a free man; the Lincoln proclamation made you free months ago. If you suffer voluntarily as a freeman it won't hurt you."

The appeal was quite thrown away upon the hunted one. When he had picked his sentence out of it he broke out in an agony of beseechment.

"Oh, faw de lub o' mussy, marstah, doan' send me back!" he pleaded. "Ef you-all only knowed wbat I done gone t'rough wid to get dis fur you wouldn't say dat!"

Joyce rose and began to walk the floor. When he spoke it was to his son.

"What say you, laddie? Shall we take the risk? Or shall we try to hide him until the army crosses the river?"

Alan's vote was for prompt action. "Let's take him through to-night," he urged. "We don't know when the army will cross, or where; and if Seth Byers or any of his bush-whackers find out that we're hiding a runaway we'll be raided sure."

"You're right, son; that's so. It must be done. Give me my hat and stick."

But at this protest uprose clamorous. Mrs. Joyce began to plead anxiously; Alan insisted that he and no other should be Pete's guide, and even reticent little Mary put in her word. For once in his life Stephen Joyce yielded.

"There is some truth in what you say, Alan. If you should fall into their hands your youth will plead for you."

"That's it, exactly," put in Alan. "There isn't the least danger—for me."

"Perhaps not so much as for another. But you mustn't forget that you carry this boy's

came to sniff at his heels and fawn upon him as he went down to the wagon-gate.

"Down, Towse!" he said, grudgingly, and opened the gate. He was holding it for Pete to pass through when a limping figure hobbled quickly into the road and barred the way. It was Jasper Garth.

"So," he said, grimly, "you've taken to running my niggers off, have you?"

Alan promptly snatched Pete's bat off.

"He's not yours, Mr. Jasper Garth. Look at him and see for yourself."

Garth limped nearer and turned the terrified negro's face to the moonlight.

"Excuse me," he retorted, with mock politeness; "he isn't mine—but neither is he yours. You're in ullee business, you and your pa. You'd ought to be ashamed!"

"I'm not ashamed, and neither is my father. It's you and your people who ought to be ashamed—buying and selling human beings like so many dumb brutes!"

It was a very hoysish thing to say—boyish and rashly imprudent under the circumstances; and Alan could have bitten his tongue before the words were cold. But the old man turned away without reply and hobbled back to the house.

"We'll have to run for it now, sure, Pete!" said Alan, excitedly. "Old Jasper Garth will have the patrol after us before you can wink twice. Keep close behind me!"

At the word he dashed across the crest road and into a crevice path leading down the cliff, and presently they were racing hot-foot down the mountain.

Alan "reckoned" it must be nearly midnight when they came out into the farm lands of the valley. He knew the mountain as he did his own dooryard, and their point of emergence from the forest was just where he had planned—on a wood road at the toe of the mountain and just opposite Shellmound. Here he called a halt for a final council of war.

"No talking from this on," he said. "We must fix it now so we'll know just what we're going to do. Do you see those houses over yonder?"

Pete looked, and saw.

"That's Shellmound, and the river's only a few yards beyond. Can you swim?"

"I kin dat, sholy."

"All right; that's good. We're going to strike straight for the river, keeping in the shadow of this rail fence. When we get to the fringe of trees on the river-bank you must slip in quietly and swim. Do you understand?"

Pete signified his understanding and assent, and they set out. The passage to the railway-track was made without adventure, and from the shelter of the last fence-panel they could see the willow fringe and hear the high water lapping among the tree-trunks.

The first-quarter moon was poising for its plunge behind the western mountain, and Alan knew it was the part of prudence to lie quietly in the shadow of the fence until darkness should favor the final dash. But the peaceful stillness of the place and hour made him careless. The friendly camp-fires were in sight beyond the stream, and he incautiously stood up to point them out to his companion.

"Halt, there, both of you!"

The explosive command came from the willow fringe, and a mounted picket spurred out of the shadows. Alan saw the hopelessness of fight, and answered the soldier's questioning—lame enough.

"That'll do," said the cavalryman. "You are Steve Joyce's boy, and you're trying to run that nigger off. The captain will settle with you. Right face; straight up the railroad! And don't you try to run, neither of you!"

Alan weighed and dismissed a dozen unpromising plans of escape in the short march up the railway-track. He had little fear for himself, chiefly because it was a Joyce trait not to be afraid; but the consequences to Pete! A hard lump came in his throat and choked him when he remembered that the runaway's life might pay for his heedlessness.

The outpost camp was a mere bivouac at the ferry-landing. There was a bunch of horses tethered to a tree, and a few men sleeping around the fire. One of the recumbent figures sat up quickly at the sentinel's challenge, and Alan had to look twice before he could believe his eyes, because it was Richard Garth.

"Hello, Alan," said the young officer, hospitably, holding out his hand. But Alan drew himself up with proper stiffness and put his hands behind him.

"I—I can't shake hands with you; I'm your prisoner."

Captain Garth came wide-awake at that, and listened to the report of his subordinate.

"Um; that's bad, Alan. I wish you'd tried to break through somewhere else. I'm afraid I shall have to carry you to Chattanooga; this black-boy business has got to be stopped some way or other."

Alan caught his breath. The prospect of the military prison at Chattanooga was bad enough; but his fear was for Pete.

"I reckon you can do what you please with me," he quavered; "but—but the boy hasn't done anything."

The captain had drawn him aside a little way, and it was so much harder to keep his voice steady when there was no one to hear save the brother of his playmate, who had also been the playmate of his brother.



"DOWN! DOWN IN THE GRASS, QUICK!"

"I CAN'T SHAKE HANDS WITH YOU; I'M YOUR PRISONER"

father, sitting there strong and self-contained, with the Great Book on his knees and the light of steadfast purpose burning in his deep-set eyes.

It was worth something to be the son of such a man; and during the prayer which followed Alan's heart glowed, and his asking was for help to be always strong and true and fearless like his father.

At the close of the prayer he rose and beckoned to the young negro.

"This is Pete Crawford, father; the boy from Major Peyton's place."

The father nodded and looked the fugitive over much as the son had. Though he was loyal to the cause of freedom, Stephen Joyce was still a Southerner, and his helpings of the runaways were of conscientious conviction rather than of sympathy. Hence, his cross-examination of the young negro was almost judicially stern.

"What made you run away, boy?"

"Dey's whup me, sah."

"Who whipped you; your master?"

"No, sah; no, indeedy, sah! Ol' Marse Major he nev' whup nobody. But he's gone off en de wars, an' dat mise'ble oberseer, 'pears lak he cayn't res' ob nights 'dout whuppin' de po' niggahs."

"Then you don't blame your master?"

"No, sah; ol' Marse Peyton nev' let nobody whup nobody; 'deed he didn't, sah."

"Then you'd better go back and wait for the emancipation to reach you—better than

life in your band. They'd call him a spy, and make short work of him."

"I'm not likely to forget that. Come on, boy, if you're ready."

Pete found his battered hat, and they forth-fared into the night, together with the father's blessing and many cautions from the mother. But because responsibility sits lightly on the shoulders of youth Alan laughed at the cautions.

Notwithstanding his easy confidence he made a mistake at the very outset. The shortest route to the river was down the crest road to a foot-path used by the mountain folk as a short cut to the village of Shellmound. But the road part of it would have to be a dash in the moonlight, with the risk of meeting the cavalry patrol; so Alan made a detour through his father's fields and those of Jasper Garth.

It was at the end of the detour that he made the mistake. Since Garth owned slaves, he argued that any chance straggler of the patrol who might see them at the Garth place would take the runaway for one of the Garth negroes. Hence, he led the way boldly through Jasper Garth's barn-yard.

The farthest was locked in the stillness of the summer night, and there were no lights either in the "quarters" or at the house. Alan had known the place since the happy days when he and his sister and Eleanor Garth had played "I spy" in the big barn; and the dogs still remembered him and

Captain Dick shook his head.

"It isn't what he has done; it's what he would do if I turn him loose. You know as well as I do that he'd tell all he knows the minute he'd reach a Yankee camp."

Alan tried to swallow the lump in his throat, and partly succeeded.

"Do you mean—do you mean you'll have to treat him as a spy?"

Captain Dick evaded the question.

"If I caught a Yankee spy over here I'd have to hang him; and this boy could tell more in a minute than any paid spy could find out in a week."

"Tell me, Dick; is it an order?"

"To hang these fly-by-nights? N-no; it's just common sense and military prudence."

"Then, Dick—oh, Dick, won't you please let him go? It's all my fault—every bit of it—because I wasn't careful enough. He doesn't know a thing that could hurt anybody. He's just up from a back-country plantation, and I don't believe he even knows the name of this river!"

The captain shook his head again, and began to tramp back and forth, stopping now and then to kick a bit of driftwood into the lapping flood at his feet. Like many a brave young fellow, he was a battle-soldier and no hangman. What Alan said was true enough; one black boy more or less in the camp-following of the enemy—a black boy who knew nothing to betray—could make little difference to the cause.

Alan sat down in the grass and covered his face with his hands. That was why he did not see Captain Dick stoop and send a larger piece of driftwood out among the tree-trunks—a log with a round knot on it, that looked curiously like a man's head bobbing up and down in the eddy. Neither did he see the captain hearken to the runaway, nor hear the whispered command, "Jump, you black rascal, and dive deep if you want to live!"

What Alan did hear was a great splash and a sharp "Halt!" from the captain; and when he looked the soldiers about the fire were afoot and running toward the river, cocking their carbines as they came.

Alan saw the round thing bobbing in the eddy. Captain Dick was pointing at it, and the word of command rang out in the stillness.

"Fire!"

Alan flung himself on his face in the long grass and screamed and stopped his ears at the crash of the volley. When he looked again the round thing was gone and the men were back again at the fire; all save one, who was standing over him.

"Git erp an' come along 'ith me," said that one. "Cap'n says I'm to take ye out o' the lnes an' turn ye loose. Come awn!"

Alan staggered to his feet and followed his guide. He did not see Captain Dick, and did not want to see him.

[TO BE CONTINUED]

IN THE AUTUMN DAYS

Just to roam the woods in the autumn days,
Or lie on the banks of the stream and gaze
At the sea of blue, with its ships of mist,
With sails and spars into amber kissed
By the am'rous sun from his ancient throne—
I am rich indeed, for 'tis all my own.

To watch by the hill with its leafy crown,
Where the quail walks forth in his dress of brown;
List the wind's low tune on its hazel harp,
A mournful dirge without flat or sharp;
All this is joy that no speech may tell
In these haunts below, where my pleasures dwell.

Where the vine swings low and the sunach burns,
And the wild grape's coat into russet turns;
Where the squirrel chirps by the old stone wall—
A home well stored in his spacious hall—
What delight to share all of Nature's store,
Here to walk with God, and to doubt no more!

—Banner of Gold.

VALUE OF OLD FRIENDSHIPS

Not until the shadows fall and our years count more than half a century do we realize what friendship really means in the summing up of life's influences; what its power is to uphold and sustain not only our vitality, but our equipoise. By vitality I mean both physical and mental vigor, the strength to grasp the rudder in days of storm and stress, ability to balance good and evil, and in the midst of the tempest to realize that it will not beat and batter us forever. The steadfast good cheer of a voice warm with sympathy for a trouble, which without explanation is understood and truly comprehended; the magnetic gift of new life from a strong grasp which has never failed us as the years went on, who shall measure these?

The thousand-sided aspect of the dear possession of a companion mind and heart which has no bond to make its ministry compulsory, no tie near enough to blind judgment, and adheres to us simply because love compels its fidelity, is beyond a true analysis. Its usefulness and its usage vary with each day, and take their shape from the color of our sky and the ordering of our destiny. To-day we know that only she who has journeyed all the way beside us can share our joy; to-morrow that none but the same lifelong friend can understand our grief.

Some years ago, at the celebration of a golden wedding, an aged bridesmaid stood beside the central figure of the pathetically reconstructed wedding group where they had

been companions fifty years before. The adherent affection of the two women shone out in their dignified and thought-lined faces. She who recalled the bridal-day stood surrounded by her children and her children's children, and the husband of her youth was as loyally devoted as when he rode down the long, shaded lane to his wedding. Kinsfolk were there in every grade of consanguinity; but it was to the silver-haired friend that the dignified matron turned with the tenderest look of remembering love, and on the arm of her gray satin gown the capable, fine hand which had wrought many things for child and grandchild rested with detaining pressure.

Emerson wisely forbade us to endeavor too ardently to fan our friendships to a sudden warmth; let the bud unfold itself slowly, he says; do not tear it open to get at its heart. The sudden opening of our sealed book of life to one whose magnetism or noble attractiveness makes confidence an irresistible impulse, when in our later years we come into unlooked-for contact with that treasure, a new friend is often a great relief; but the counsel of him who knows as we know is "like the shadow of a rock in a weary land."

Children must be carefully guarded against the sudden likes and dislikes which they are so apt to take. The extremely intimate companion of last month is very often supplanted by a new acquaintance, and the chum and confidante who shared everything suddenly neglected. It may be some passing cloud of difference of opinion, or a lack of interest in the absorbing hobby of the altered boy, but there is often a grievous hardening of heart which leaves a scar. Fitful friendships should be seriously discouraged; and though theorizing may not be of use to a jolly lad or thoughtless girl, it can easily be made plain to them that to be a warm friend to-day and negligent and discourteous to-morrow is a very unworthy practice.

To forgive small injuries, to bear small annoyances from a schoolmate or companion, should be made a part of the daily discipline; a score of years hence the very remembrance of the dissension healed by forbearance and forgiveness will be a source of delight to the men and women who recall each detail with eager care.

Faithfulness alone wins fidelity, and the true-hearted youngster who champions and defends his comrade will win for himself that which he can neither buy nor win in any other way. The rapturous delight with which a group of young people will gather around their mother and some fond old friend, to hear the stories of their earlier years, is in itself a testimony to the charm that hangs about the companionship which has passed safely through the phases of a long life.

When at some crisis of a man's career a helping hand comes to his aid, and the favor is indorsed by a cordial "I would do much more than this for your father's son," it seems like a continuance of the paternal protection. It is made yet more precious by its implied devotion to what has been so dearly loved and sadly lost. The interest-bearing bonds or rich estate a man may leave behind him are poor inheritance in comparison with the legacy of a good man's regard, certain and unflinching ready to serve, to forgive mistakes, to stand between youthful errors and the world's condemnation, and to "hold hard" when trouble comes.

There are friends who can so do a service as to make you believe that they themselves are the persons benefited, and wipe out obligation by forgetting it themselves. There are women who, by the sheer force of their loyalty and devotion, have carried a friend through the grievous shadow of family shame, and without a word of entreaty kept an innocent life above the troubled waters with which sin had surrounded it. Any of us can remember cases in which the gentle insistence of some brave, faithful friend has prevented the social door from closing against the wife and children of a dishonored father.

Even that crucial test of how we regard friends richer than ourselves, the willingness to receive pecuniary aid from them, can sometimes be applied to those endowed with the loftier characteristics of our complex humanity without disappointment. There are men and women who can bridge over dark chasms threatening the lives of their friends in such a tender fashion of unity in the present danger that the rescued forget that they alone were in peril.

Many a secret sorrow has been healed, many a wound stanching, by friendly sympathy and co-operation, which no power on earth could have induced the sufferer to disclose to parent or relative.—New York Post.

CENSUS-COUNTING MACHINE

To the casual observer the United States census-office at Washington appears to consist of four acres of young women, a border and a few spots of men, and a roar like that of a woolen-mill in full blast. The census building has been constructed like a factory, low and wide, with a glass roof, and it covers the greater part of a full square.

Mingled with the roar is the merry tinkle of bells, something like the signal-bells of countless type-writers, only louder. A person entering the room realizes that these sounds come from long banks of machines. On every hand there is a galvanic activity that is most

confusing. Each girl seems intent on a mechanical contrivance, whose purpose is not at all evident, but which engrosses all her senses and keeps her hands going in a way to make one dizzy. They are a youthful-looking assemblage, who would seem more appropriately environed by a hammock and a yellow-backed novel; but they are too intent on their work to suggest a love of ease; they are all working for records, upon which the new gradations of salary depend.

The Washington end of the census work—the counting and tabulating—is done by mechanical appliances so wonderful that the only marvel left is that they should need any one to operate them. With one movement of the hand—simply the pressing down of a lever, a thing which is done in a sixteenth part of the time required to tell it—fourteen facts may be selected from the official record of one of the country's population and added to a growing column of statistics with an accuracy which does not admit of error. The one motion suffices to record the history of the individual in question; on the various dials which are in front of the operator are records which show whether he is a foreigner or a native, whether white or black, married or single, male or female, adult or child, and so on through all the questions the enumerator has asked. For each person the machine answers with a ring of its bell. If there is an impossibility in the data fed in the machine it will decline to do business, the bell will not ring and the dial will not record. A black father having a white child the machine will not believe, and so will not record it, as it would not any statement regarding the family of a five-year-old child.

The scheme which enables the counting to be done mechanically is based on the idea of having each person in the United States represented by a card with descriptive holes punched in it. The hole which signifies a person to be a male is punched in a particular spot on the card, and if all the cards representing males were stacked up evenly a wire could be passed from the top to the bottom of the pack through these holes without encountering any obstruction. A hole in another part of the card indicates the person to be an adult; and so on through the entire description. For purposes of counting and registering the data the cards are fed into the machines; certain wires come down and feel of the cards, penetrating where there are holes, and so establishing electric connections which operate the registering machinery. It is like the type-setting machine, in that it is all very simple when understood.

But before the counting can begin the written reports which come in from the enumerators all over the country have to be translated into the language of perforated cards. That is what most of the employees of the census bureau are now doing. Each girl has an enumerator's blank before her on which are the data; with her left hand she adjusts a good-sized card to a place prepared for it in the middle of the desk, and with her right guides the lever and works the punch. In a small fraction of a minute she will have the card punched full of holes, and passes on to the next. One girl will punch sometimes a thousand cards in a day. These are placed in neat wooden boxes, which are labeled and numbered, in readiness for the tabulating-machine.

At present the counting-machines are used merely to get the population totals, although permitted to register a few other items for practice. But before the census work is over the cards will be run through the machines a great many times, as will be made necessary by the many combinations and groupings of facts desired.—Boston Transcript.

THE CHINESE MINISTER

Throughout the recent excitement incident to the outrages in China no persons are receiving more perfect protection or courteous treatment than the Chinese minister to this country, Wu Ting Fang, and his family, in the legation at Washington. Interest naturally centers around this representative of a nation which is now claiming the attention of the world.

Wu Ting Fang is one of the ablest and most progressive statesmen of the Far East. He speaks the English language with fluency, and is thoroughly conversant with American politics and business methods. He was at one time secretary to Li Hung Chang, and was one of the promoters of the first railway in China. He is the first Chinese to become an English barrister. He has all the genial tact of a man of the world, and is an entertaining conversationalist. He is quick to understand others, but reserved in expressing his own mind. He has proved a master in the art of concealing facts regarding the young emperor.

The wife of Wu Ting Fang is also liberal-minded and progressive, and has made a study of our language. The minister and his wife continue to wear the native dress of their land—the conventional robes of heavy silk—and theirs are the only strictly Oriental rooms in Washington. The reception-room of Minister Wu is of East India onyx and exquisitely carved wood decorated with gold. The ceiling is covered with rose silk, and bronze lanterns furnish a subdued light.

The hall-room is the most unique in Washington. It is domed with blue opalescent

glass, with a dado of polished oak. Roman design, of old ivory tint, forms a dado among the palms. Above this broad band of gracefully modeled goddesses is a frescoed wall, the background of which is a soft tint of Pompeian red.

An orchestral gallery is supported by exquisitely carved red pillars, and life-sized bronze lions guard the imposing entrance.

Madame Wu's own room is furnished in a soft shade of pink, resembling the lining of the sea-shells. The ceiling represents a white lace drapery drawn over flowers.

This family enters with zest into social gaieties of the capital, and entertain in an elaborate manner. When madame receives she always remains seated, though she has followed American women in one custom—that of allowing her hands to appear.

Wu Choa Chu, their one son, attends the schools in Washington, and speaks English well.—Buffalo Express.

QUEER FANCIES IN CUBA

A belief that has a strong hold on a certain class of people in Cuba is that certain diseases can be cured by eating dirt; and so when one of these diseases manifests itself the believer does not consult a physician, but instead gathers up a handful of dirt and eats it. If any relief is obtained it must be the result of faith cure, which the patient is unconsciously trying. Why all kinds of germs are not taken in with the dirt is a mystery—possibly they are.

The moonlight seems particularly objectionable, and strangers are warned not to go out in it with uncovered heads, and not to go out in it at all if it can be avoided; it is thought that this light brings many evil effects, and not under any circumstances will a Cuban sleep under its rays—he thinks that, among other things, it will draw his mouth to one side of his face.

To ward off sickness of various kinds there are little silver or tin images to wear suspended about the neck as a kind of charm. Images of the same kind are offered in the churches as thanksgiving or prayer, and so we find near the altars of certain churches cases in which are hundreds of these little trinkets—hands, feet, arms and babies.

The hooting of an owl is taken as a very bad sign. The superstitious Cuban kills any creature of this kind which makes weird sounds near his home. This is supposed to break the spell, and it is not then inevitable that a member of the family shall meet death in the near future. Butterflies also are looked upon as omens.

The Cuban women are great believers in the efficacy of various herbs in sickness, and have a remedy for almost every ailment. American physicians find they have much more knowledge in this line than the women of our own country, and more knowledge of sickness in general. In many homes, even the poorest, there is a thermometer, and if any one is ill the temperature is taken before the physician arrives.—New York Sun.

THE GREAT WALL OF CHINA

For ten thousand li—that is to say, for some three thousand miles—with any number of links, additions and block-houses, the Great Wall of China stretches from Shan-hai-kuan, in the Gulf of Liaotung, on the northeast, to a little below Suchau in Kansuh, on the west.

To serve as a defense against the Huns it was built by a Tsin emperor named Hwangti, in the early, one might almost say the semi-mythical, ages of Chinese history more than two hundred years before Christ, and repaired by a great Ming emperor about 1480 A.D., with the aid of fifty thousand soldiers, to secure the frontier against the growing power of the Tartars.

If its age is semi-mythical its grandeur is also semi-mythical. Meandering over mountain and across valleys, broken by none of nature's obstacles, and taking ups and downs of one of the most sterile ranges in the world as it happened to strike them, the Great Wall is like no other building reared by the hand of man.

At the port of Shan-hai-kuan, now connected with Tien-tsin, and so on with Peking, by railway, the Great Wall dips into the sea, and its nearest point to the capital is up the Peiho, due north. The line, or cross-cut, of the Great Wall, that can be visited in three or four days from Peking, was constructed about five hundred years ago by the Miugs, and runs almost due south from a point below Kupeh-tau, branching south and west not far from Fau-ping-fu, and it can best be seen in all its majesty some fifteen miles west of the city of Naukau, through the Nankan pass, which admits the great caravans of Mongolia and Tibet to the Peking plains.

From early morn to dewy eve the thoroughfares are crowded not only with the normal traffic afoot, on mule-back and in carts, but by the long lines of Bactrian camels laden with the raw product of the western khanates.

Not far away is the parade-ground of the troops, and no funnier spectacle can be seen than a Chinese regiment on the march. When once the "show piggin" is over the order of the day is "go as you please." The rank and file, with a colored jacket thrown over their coolie clothes, walk in detached groups or fall out

altogether, carrying their old-fashioned Snider rifles in a way unrecognized by the drill-book.

A great difficulty in keeping any rifle issued in a fit state for use is that the Chinese soldier will use it as a carrying-pole, with which he can earn coolie wages when off duty. It is a good thing, no doubt, for a regiment to take its refreshments on the march, without the necessity of a formal halt, but it is none the less a quaint method of cleaning the rifle-barrel, after firing, to pour down it what remains of the hot tea that they buy en route. To use tea as a substitute for oil may be economical at the moment, but must cost the war-office a trifle for wear and tear.

Another strange incongruity is to behold the Manchu soldier still practising with his bow and arrow at a distance of about thirty yards. This remains a necessary and valued part of his training, and a high proof of military efficiency it is considered to be when a troop of cavalry gallops past in single file, shooting at a target, with shouts of excitement.

It is still the custom to choose officers by this test, and a Manchu general not long ago issued a manifesto deploring the tendency of young officers to imbibe modern ideas of warfare, and laying down the principle that the true trial of strength and courage was in the use of the bow. Once outside a radius of five miles the only signs of the neighborhood of the great camps is the passing of a military caravan of ponies laden with stores and decorated by little yellow flags, the guns bundled together like fagots.

Through the Great Wall and the Nankau pass, first passing the wall at Kalgau, is carried all the trade of central Asia, and much, also, that comes by waterway at first along the tributaries of the Hwang-ho is diverted to this route. To tap such a trade by railways would obviously be a profitable undertaking, and there is talk of an American line, to reach from Pekin to Kalgau, along the pass and on up to the first plateau.

Pekin spreads in its suburbs far beyond the outer walls in long, unmade roads of booths and shanties full of traveling-carts and itinerant vendors of the "chow," of which hungry drivers are likely to stand in need. Not far off, along the main routes of communication, begin the dotted lines of walled cities, each garrisoned of old by the scattered divisions of the Manchu army.

In the far distance, from the gate of Pekin itself, is to be seen the range of mountains to the northwest, which goes by the name of Nankau, the city at the entrance of the pass. Burnt and blown to a tawny color in their sharpness, their barrenness and their utter want of human occupation, these mountains remind one of the foot-hills of the northwest frontier of India by the Kaiber and Kobat passes.

Nature could not provide a nation with a grander barrier to the incursions of the alien, and without the vestige of a wall a hundred opportunities are given for an impregnable series of defensive works. No such road has been made to assist an invading army as now pierces the Malakand, and the traditional caravan route is a mere stony track, winding in and out, up and down with the ramifications of the passage. Curses loud and deep, in many dialects, accompany the slithering and struggling of countless heasts of burden going to and fro. From Nankau City to the actual wall is, it is computed, some fifteen miles in distance, and along the overhanging hill runs the line of telegraph-posts that crosses the Gobi desert to the frontier port of Kiakta, and so on by the Russian line of communications.

About a third of the way up one comes to a veritable rock gate, on the sides of which are mounted two small "joss-houses," where travelers can make their peace with the gods before they enter on the perils of the Mongol road. Above them, on the higher crags, were built ages ago the first of the square watch-towers, which stretch in unbroken regularity to the furthest points of the Old Wall.

Twisting about the hills are other walled inclosures, meant to be used as auxiliary forts to the main lines. At last, after many a fancied recognition, you come in sight of the Great Wall itself.

For once in a way a world-famous wonder is no disappointment. The dreary yellow of the encircling mountains, the sharp-cut distinction of the country's face, and the wild aridity of the desert beyond, all lend enchantment to the view, the enchantment of the savage tracts which bred the conquering nations of the modern world.

From Mongolia came the Goth and the Hun, the Tartar and the Turk; in fact, according to the ethnologist, all the world's energy and force must have been generated upon this barren tableland. From the great gate of the Great Wall you look on to Mongolia, though it is not so called until you pass Kalgau, and you do not marvel that the mighty races Mongolia has bred have the grit and pugnacity driven into their bones.

A troop of English cavalry in line could pass along its ramparts for the whole of its extent, and one of its bricks weighs as much as fourteen pounds. Every hill's crest carries it to its topmost point, and no slope is too precipitous for it to descend, while to make the permanent way good going for men on the march the acclivities are broken into the steps of an easy staircase, still sound enough for all to traverse. Once seen, the Great Wall of China can never fade from memory.

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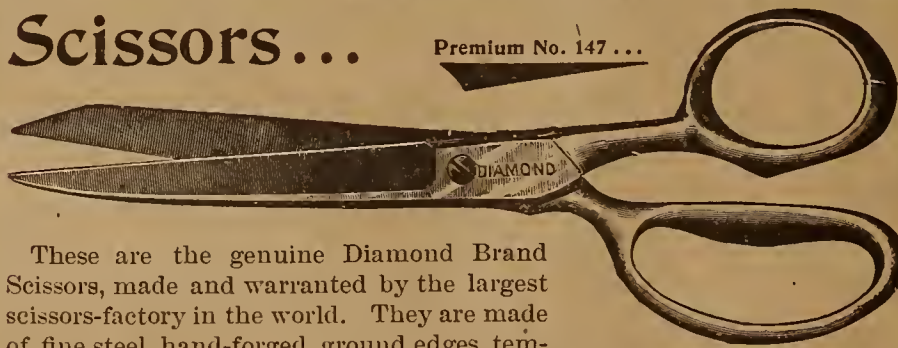
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KIPLING ON THE FUTURE

When earth's last picture is painted, and the tubes are twisted and dried,
When the oldest colors have faded, and the youngest critic has died,
We shall rest, and, faith we shall need it—lie down for an eon or two,
Till the Master of all good workmen shall set us to work anew!

And those that were good shall be happy; they shall sit in a golden chair;
They shall splash at a ten-league canvas with brushes of comets' hair;
They shall find real saints to draw from—Magdalene, Peter and Paul;
They shall work for an age at a sitting, and never be tired at all!

And only the Master shall praise us, and only the Master shall blame;
And no one shall work for money, and no one shall work for fame;
But each for the joy of the working, and each in his separate star
Shall draw the thing as he sees it, for the God of things as they are!

—Rudyard Kipling.

RECOGNIZING LIMITATIONS

As YOUNG people start out on their life's career they naturally divide into two classes. One, the smaller class, is composed of bold, aggressive spirits who are bound to become "self-directing things of power." They have in greater or less degree creative energy, originating impulses. If they do not find a place they will make one. In business life they are bound to venture, to gain, to lose, to fall, to rise, ever going on with well-grounded confidence that they will "generally fall on their feet." Business life to them has the fascination of a football game, and they take the risks with a cheer, and the hard knocks with a certain joy in their ability to stand hard knocks. They are alert in their watchfulness of all the tides and eddies of commercial life, quick to seize a point of vantage fertile in resources, resolutely steadfast in holding whatever is gained.

The other, the larger class, is composed of more timid souls, but often of those not less faithful or necessary to the rolling on of life's wheels of industry. These have slight originating impulses; they are not resourceful, not quick to see opportunities for profitable ventures; they usually work best under direction, and succeed best when they devote themselves steadily to some one pursuit. If, becoming dissatisfied, they strike out blindly in the path of bolder spirits they are likely to be taught the truth of the old adage that "larger boats may venture more, but little boats should keep near shore."

A clear-sighted recognition of the class to which one belongs, and a contented acceptance of the fact, may be to many a youth a long step in the direction of happiness and true, if not distinguished, success.—Young People.

SEEING THE BRIGHT SIDE

An old colored woman went to a delegate of the Christian Commission at Vicksburg, who was very ill with fever and much depressed in spirit, and said:

"Massa, does ye see de bright side dis mornin'?"

"No, Nanny," said I; "it isn't so bright as I wish it."

"Well, massa, I allus see de bright side."

"You do?" said I. "Maybe you haven't had much trouble?"

"Maybe not," she said; and then she went on to tell, in her simple, broken way, of her life in Virginia, of the selling of her children one by one, of the auction-sale of her husband and then of herself. She was alone now in camp, without having heard from one of her kindred for years.

"Maybe I ain't seen no trouble, massa," she said.

"But, Nanny," said I, "have you seen the bright side all the time?"

"Allus, massa; allus."

"Well, how do you do it?"

"Dis is de way, massa. When I see de brack cloud comin' over"—and she waved her dark hand inside the tent, as though one might be settling down there—"an' 'pears like it's comin' crushin' down on me, den I jist whips aroun' on de oder side, and I finds de Lord Jesus dar, and den it's all bright an' cl'ar. De bright side's allus whar Jesus is, massa."

"Well, Nanny," said I, "if you can do that I think I ought to."

"'Pears like you ought to, massa, as you's a preacher of de Word of Jesus."

She went away; I turned myself upon my blanket, and said in my heart, "The Lord is my Shepherd." It is all right and well. Now come fever or health, come death or life, come burial on the Yazoo Bluff or in the churchyard at home—"the Lord is my Shepherd."—Detroit Christian Herald.

CHARACTER

Character is a perfectly educated will.—Novalis.

Handsome is that handsome does.—Goldsmith.

Character is what nature has engraven in us; can we then efface it?—Voltaire.

Actions, looks, words, steps, form the alphabet by which you may spell character.—Lavater.

Character is higher than intellect. A great soul will be strong to live as well as to think.—Emerson.

Not in the clamor of the crowded street,
Not in the shout and plaudits of the throng,
But in ourselves are triumphs and defeat.

—Longfellow.

Character, like porcelain ware, must be printed before it is glazed. There can be no change after it is burned in.—Beecher.

Character is the spiritual body of the person, and represents the individualization of vital experience, the conversion of unconscious things into self-conscious men.—Whipple.

The effect of character is always to command consideration. We sport and try and laugh with men and women who have none, but we never confide in them.—Simms.

A good character is in all cases the fruit of personal exertion. It is not inherited from parents, it is not created by external advantages; it is the result of one's own endeavors.—Hawes.

The noblest contribution which any man can make for the benefit of posterity is that of a good character. The richest bequest which any man can leave to the youth of his native land is that of a shining, spotless example.—Winthrop.

NEVER KNEW HIM

A touching story is told of the child of a well-known French painter. The little girl lost her sight in infancy, and her blindness was supposed to be incurable. A famous oculist in Paris, however, performed an operation on her eyes and restored her sight.

Her mother had long been dead, and her father had been her only friend and companion. When she was told that blindness could be cured her one thought was that she could see him; and when the cure was complete and the bandages were removed she ran to him, and, trembling, pored over his features, shutting her eyes now and then and passing her fingers over his face, as if to make sure that it was he.

The father had a noble head and presence, and his every look and motion was watched by his daughter with the keenest delight. For the first time his constant tenderness and care seemed real to her. If he caressed her, or even looked upon her kindly, it brought tears to her eyes.

"To think," she cried, holding his hand close in hers, "that I had this father so many years and never knew him!"

How many of us are like the little blind girl?—The Word and The Way.

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Failing Eyesight, Cataracts or Blindness Cured without the use of the knife.

Dr. W. O. Coffee, the noted eye specialist of Des Moines, Iowa, has perfected a mild treatment by which anyone suffering from failing eyesight, cataracts, blindness or any disease of the eyes can cure themselves at home. Judge George Edmunds, a leading attorney of Carthage, Ills., 79 years old, was cured of cataracts on both eyes. Mrs. Lucinda Hammond, Aurora, Neb., 77 years old, had cataracts on both eyes and Dr. Coffee's remedies restored her to perfect eyesight. If you are afflicted with any eye trouble write to Dr. Coffee and tell him all about it. He will then tell you just what he can do. He will also send you **Free** of charge his 80 page book, "The New System of Treating Diseases of the Eye." It is full of interesting and valuable information. All cures are permanent. Write to-day for yourself or friend to



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A booklet with this title, just published by the Chicago, Milwaukee & St. Paul Railway, should not only be in the hands of every traveler, but should have a place on the desk of every banker, merchant or other business man.

The four "Time Standards" which govern our entire time system and which are more or less familiar to most of the traveling public, but by many others little understood, are so fully explained and illustrated by a series of charts, diagrams and tables that any one who chooses can become conversant with the subject in question. There are also some twenty-four tables by which almost at a glance, the time at any place being given, the hour and day can be ascertained in all the principal cities of the world.

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THE YOUTH'S COMPANION, BOSTON, MASS.

The Standard American Cook Book

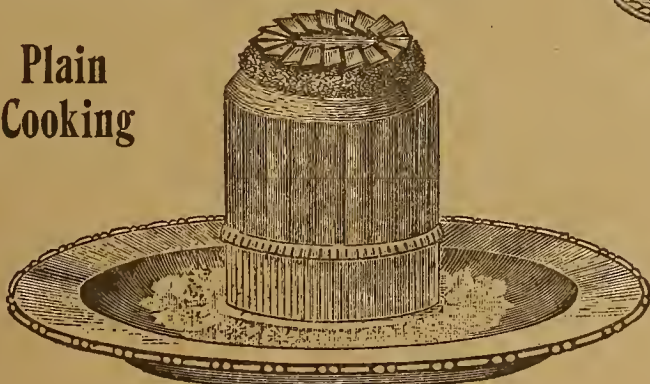
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NOTHING adorns a home so much as do well-selected pictures. They need not be expensive, but they must be artistic. The demand is for fine, pleasing and artistic pictures. Heretofore the price of such pictures has been so high that but few could afford to buy them. To meet this demand we have arranged, at a great expense, to give these Peerless Pictures with the Farm and Fireside. Parents should surround their children with noble pictures—pictures that appeal to the child's active imagination, cultivate true artistic ideals, and act as an inspiration to pure thinking and holy living. This idea has been kept in mind in selecting these pictures. They will ever be a silent influence for the noble, the true, the beautiful and the good. They are suitable for school, home and library decoration.

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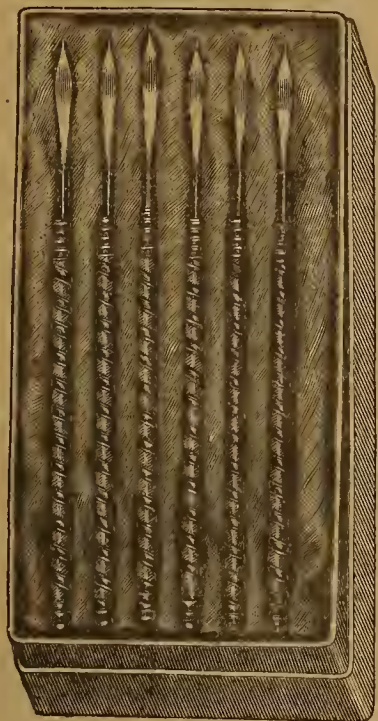
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6 SILVER-PLATED NUT-PICKS

In New England there is a factory which manufactures most of the nut-picks sold in America. We have contracted with them for a large number of sets of their most popular style, which is shown here.



Premium No. 125

THEY ARE MADE OF STEEL
HANDSOMELY TURNED HANDLES
WELL SILVER-PLATED

They are packed six in a cloth-lined box. These picks sell in jewelry-stores for 50 cents a set and upward. We give you a set for procuring two yearly subscriptions for the Farm and Fireside.

Each set of these silver-plated nut-picks comes in a cloth-lined box which measures 5½ inches long, 3 inches wide and ¾ of an inch thick. They make

A HANDSOME
AS WELL AS
A USEFUL PRESENT

Last season we sent out many thousands of these picks and did not receive a single complaint. Having given such universal satisfaction we are pleased to offer them again for the benefit of those who did not receive a set last year. Order a set and we know you will be pleased. Satisfaction guaranteed or your money refunded.

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Sterling-Silver Embroidery Set

We offer here a most liberal premium for so few subscriptions. The set consists of a pair of fine steel Embroidery-scissors with genuine sterling-silver handles, a silk Emery Ball with sterling-silver top, silk cord and tassel, and a good weight sterling-silver Thimble. The whole is inclosed in a neat heart-shaped box lined with sateen. Entire satisfaction guaranteed.

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For this set send us SIX yearly subscriptions to the Farm and Fireside, one of which may be your own

This is a very desirable set, the articles all being of first-class quality. It is very useful, and particularly appropriate for a gift. Sent postage paid.

We Will Send the Farm and Fireside One Year and This Embroidery Set for... **\$1.10**

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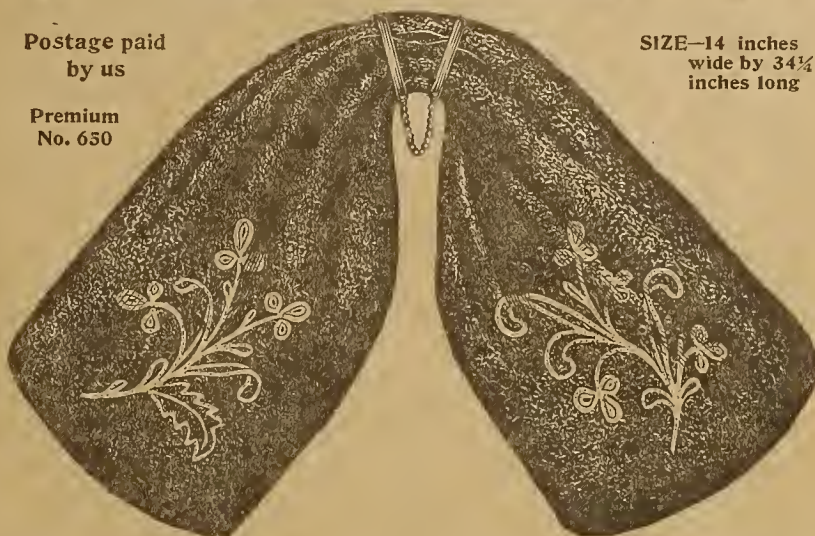
This Elegant Cloth School-Bag

AND THE FARM AND FIRESIDE ONE YEAR FOR \$1.00

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Premium No. 650

SIZE—14 inches wide by 3¼ inches long



This bag is well and strongly made of heavy black cloth neatly embroidered with red silk, and has nickel-plated rings and chain. It may be used as a shopping or traveling bag as well as for a school-bag. This is one of the most useful articles ever offered, and any school-girl will be delighted with it. It is very strong and is guaranteed to give entire satisfaction.

We Will Send the Farm and Fireside One Year and This School-bag for... **\$1.00**

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This elegant School-bag given as a premium for FIVE yearly subscriptions to the Farm and Fireside

A New Repeating Air-Rifle

Given for SIX Yearly Subscriptions

Premium No. 481

DESCRIPTION—The rifle is thirty-two inches long, with nickel-plated barrel, a globe sight and wooden stock. Any boy can operate it. It is a very hard shooter. It is easily and quickly loaded. Do not confound this rifle with the cheap ones that are not repeaters.

SHOTS 300 TIMES—The ammunition-chamber in the rifle holds over 300 bullets. The ammunition is B. B. shot, which is for sale in stores everywhere. Ten cents will buy about 1,000 bullets. By constant and careful practice remarkable skill in marksmanship can be attained.

We guarantee each and every rifle to arrive safely and in perfect condition and to be as described and to give entire satisfaction or money refunded.

SHIPPING DIRECTIONS—The rifle must be sent by express, charges to be paid by the receiver in each case. The express charges will be from 25 to 50 cents—generally 25 to 35 cents, according to the distance.

We Will Send the Farm and Fireside One Year and This Air-rifle for Only... **\$1.50**

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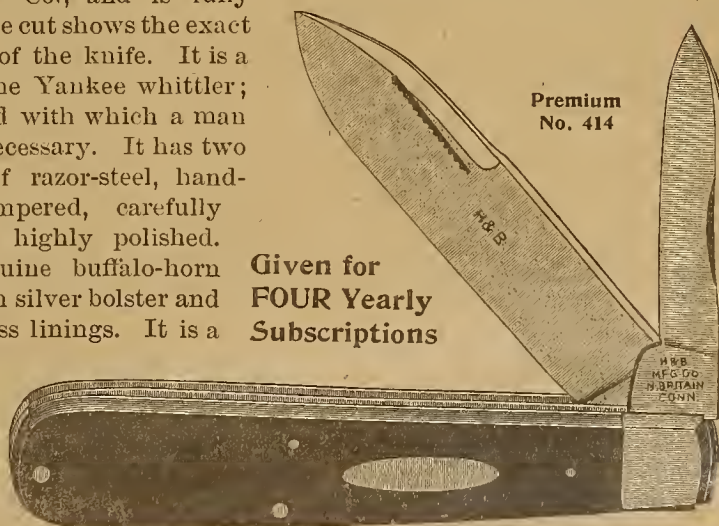
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This is one of the highest-quality knives made by the celebrated H. & B. Manufacturing Co., and is fully warranted. The cut shows the exact size and shape of the knife. It is a regular old-time Yankee whittler; one of the kind with which a man can shave if necessary. It has two blades made of razor-steel, hand-forged, oil-tempered, carefully sharpened and highly polished. It has a genuine buffalo-horn handle, German silver bolster and shield, and brass linings. It is a strong knife, made for service; it usually sells for \$1, and is well worth the price.

Premium No. 414

Given for FOUR Yearly Subscriptions



We Will Send the Farm and Fireside One Year and This Pocket-knife for... **80 Cents**

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This Pocket-knife given as a premium for FOUR yearly subscriptions to the Farm and Fireside

Address FARM AND FIRESIDE, Springfield, Ohio

FARM SELECTIONS

A SHAKY SEED CONTRACT

AT THE New York State Fair we met a number of farmers who complained of the business done by a seed company said to be located at Buffalo, New York. This company had an exhibit on the fairgrounds, with several loud-talking agents who were past masters at the art telling big stories about farming. One of these agents loudly proclaimed that he had a new corn, the result of a "cross between Stowell's Evergreen and Pride of the North." If there are any possible good qualities which this corn did not possess the agent had either forgotten them or else the English language is not strong enough to give them proper expression. It was the same way with celebrated new potatoes, oats, rye and other farm products. In view of these big stories and the earnest complaints made against the company we spent some little time in looking them up. We find that they go to farmers through the country asking them to go into a contract. The farmer is expected to sign this agreement:

Sirs:—I will sow bushels of your New Czar rye before September 30th this year at the rate of one and one fourth bushels to the acre on my best ground properly cultivated, prepared and fertilized with well-rotted barnyard manure or some standard commercial fertilizer. I reserve the right to buy the seed at two dollars a bushel before December 15th this year if I conclude not to pay for the seed before that time. I agree to mail a report on the crop and ship back ten bushels of marketable rye for each bushel of seed from station on or before August 20th next year, one half to be the new rye, the other half good marketable rye, any variety.

Signed

In our opinion a farmer would be foolish to accept any such contract. Take the average yield of rye. He cannot afford to give ten bushels properly cleaned and loaded on the cars for one bushel of seed. We do not see that he has any guarantee that the rye is in any way better than grain grown on his own farm for years. Of course, the agent says that the rye, oats and corn are far superior to the ordinary sort; but this statement does not make them so. It would be an easy matter, if a man wanted to do so, to go to the elevators in Buffalo and buy large quantities of cheap grains of ordinary kinds. If such oats, rye and wheat could be sold to farmers on this contract, getting ten bushels back for every bushel of seed delivered, the business would be far better than any scheme of planting and reaping yet devised. We are frank to say that we do not like this way of doing business. The best farmers and the experiment-station people do not seem to have heard of these wonderful new varieties, and the average farmer makes a mistake in going into a contract of this sort until he is advised by those who ought to know that the varieties are superior to those which have given fair results on his farm. In our judgment this game is about like that played by those Ohio nursery people. The agents go about telling wonderful stories about new varieties of fruits which the experts never heard of. They tell the farmer of the wonderful advantage to him of getting in ahead of his neighbors in producing these so-called new varieties. No farmer would think of going to his grain-bin and measuring out ten bushels of his own wheat for a bushel of some variety which he has never seen growing, and which may or may not be equal to that in his own bin. Yet that is just what these people ask the farmer to do. From the information we have been able to obtain we do not hesitate to warn our readers against this scheme. We would not under any circumstances sign a contract offered by this company. In our judgment every reader of the "Rural New-Yorker" who does so will live to regret it.—Rural New-Yorker.

You cannot satisfy some men,
No matter how you try;
Give them the bread they ask for
And they will kick for pie.
—Chicago News.

MUTTON-CHOPS

If the pasture is short turn the sheep in the wood-lot. They will browse off young growth and much foliage of the underbrush. Such forage has been found by chemical analysis to be equal to our best pasturage in food elements. When sheep become accustomed to it they eat it with a great relish.

When selecting a pure-bred sire to grade up a flock of inferior ewes select one which is especially strong in those points in which the ewes are weak. This is usually a general lack of meatiness, especially on the back and loins. We want a broad back and square, full quarters.

A ram must not only be thick and meaty in make-up, but he must be bold, strong and active, which characteristics stamp him an impressive sire.

One cross of first-class ram on slim, inferior ewes will bring square, flat-backed lambs, of a good mutton character.

Fifty acres of good land will support a hundred ewes and their lambs. Ewes should not be bred before one year to eighteen months old.

Good, strong wool fiber is only grown on well-nurtured, thrifty sheep. If allowed to run down in condition at any time there will be a corresponding check in the growth of wool and a weakness produced in the fiber.

The ram should not be allowed to run at large with the flock unless the flock is very small, and then it is better to keep him by himself, where you can give him extra feed and care.

Keep the ram in a small lot near the yard, where the ewes can be turned in for half an hour morning and evening during the breeding season, and the ram allowed to be with them.—Farm Journal.

LAWN-MAKING

One of the greatest problems in general gardening is the production of a good turf and maintaining it. Yet it is easy to solve, too, if carefully attended to.

The chief thing is to start right. There should be a good, rich, loamy top soil six inches in depth, at least, in which the seed should be sown. Unless for some very good reason, which would seldom be the case, one kind of grass only should be sown, which will make an even, regular growth if cared for. Dishonest contractors are occasionally to be met with who do not hesitate to "skimp" with the top soil, and a weak, stunted and tufted growth of grass is the result.

Kentucky blue-grass is the most popular and best for more northern states, being very hardy and close-growing. It is a famous pasture-grass, and thrives in almost all soils. For excessively dry soils, where it has been found difficult to establish ordinary grass, sheep-fescue, a very fine "silky" grass, will be found admirable. Around the base of large trees, where it is not also shady, it will grow right up to their trunks. This is also recommended for sowing in sod which is troubled with annual grass or weeds, as it may be cut very close and the annuals prevented from seeding.—Meehan's Monthly.

THE GOLDEN GATE

The Golden Gate is chiefly renowned for its natural beauty and for its poetic suggestions; but without renouncing an atom of these desirable characteristics, there lies beyond the new meaning as it is now dawning upon the popular understanding, and that is that this beautiful break in the Coast Range is not merely a gate to the Pacific, but to the Orient. Possibly in earlier times the term Golden Gate signified the entrance to the gold-fields of California. Since then it has been to most observers the opening through which gleam the golden glories of the incomparable sunsets of our coast. Now it certainly has added significance, and is a symbol, and a thoroughfare as well, of the golden opportunities in the East which will bring progress and growth to our Western coast, in the rewards for commerce which will arise with our new possessions in the Pacific and with the rising and unfolding Orient.—The Pacific Rural Press.

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The cost of keeping a house in good condition for a series of years is less with Pure White Lead than with any other paint. When repainting is required the surface is always in good condition. These brands are genuine.

FREE For Colors use National Lead Company's Pure White Lead Tinting Colors. Any shade desired is readily obtained. Pamphlet giving full information and showing samples of Colors, also pamphlet entitled "Uncle Sam's Experience With Paints" forwarded upon application.

National Lead Co., 100 William Street, New York.



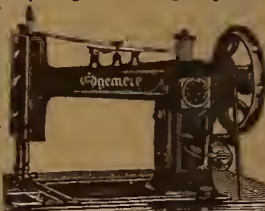
This illustration shows the machine closed, to be used as a cabinet table, stand or desk.

SEND NO MONEY Cut this advertisement out and send to us and we will send you this, **OUR HIGH GRADE DROP HEAD CABINET EDGE-MERE SEWING MACHINE** by freight, C. O. D., subject to examination. You can examine it at your nearest freight depot, and if found perfectly satisfactory, exactly as represented, equal to the highest grade sewing machines advertised by other houses at \$20.00 to \$30.00, and as good a machine as you could buy from your dealer at home at \$30.00 to \$40.00, the greatest bargain you ever saw or heard of, pay your railroad agent our **SPECIAL OFFER PRICE OF \$12.75** and freight charges. Give the machine three months' trial in your own home and we will return your \$12.75 ANY DAY YOU ARE NOT SATISFIED.

OUR \$12.75 EDGE-MERE SEWING MACHINE is covered by a binding 20-year guarantee, is made by one of the best sewing machine makers in America, has every new and up-to-date improvement, very easy to run, is very light running, does any work that can be done on any sewing machine made. It comes in a beautiful solid quarter-sawn antique oak, drop head cabinet, as illustrated. Cabinet is beautifully finished, highly polished and decorated with a complete set of the finest colored floral marquetry designs.

WE FURNISH THIS SEWING MACHINE COMPLETE with a big double set of attachments and accessories, instruction book and our 20-year binding guarantee, as one of the highest grade, high arm, 5-drawer marquetry decorated, drop head cabinet machines made. **ORDER TO-DAY. DON'T DELAY.** We can only guarantee this special \$12.75 price until our stock on hand is gone.

Address, **SEARS, ROEBUCK & CO. (Inc.), CHICAGO.**



This illustration gives you an idea of the appearance of the High Grade, High Arm Edge-mere Sewing Machine, which we furnish at \$12.75 in the handsome 5-drawer drop head oak cabinet illustrated.

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AMERICAN Field & Hog Fence.

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THIS LANTERN is the culmination of a vast deal of experiment, and it is offered as something *extra good* in the Lantern line. This Lantern is made on the "Cold Blast," principle and is fed exclusively with cold air, that which comes from above, being taken in through openings between the two rings at the top. This system of air supply greatly stimulates combustion with the resultant extra volume and intense whiteness of its light. It is fitted with an entirely new and most effective device for raising and lowering the globe, which also locks the burner in position. If your dealer does not keep it, we will send one to you for \$1.50, expressage paid.

The Catalogue, which we mail free, will give you an idea of the extent of our line of Lamps and Lanterns.

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OCT 1900
U. S. Department of Agriculture



VOL. XXIV. NO. 3 EASTERN EDITION NOVEMBER 1, 1900 Entered at the Post-office at Springfield, Ohio, as second-class mail matter TERMS 50 CENTS A YEAR 24 NUMBERS

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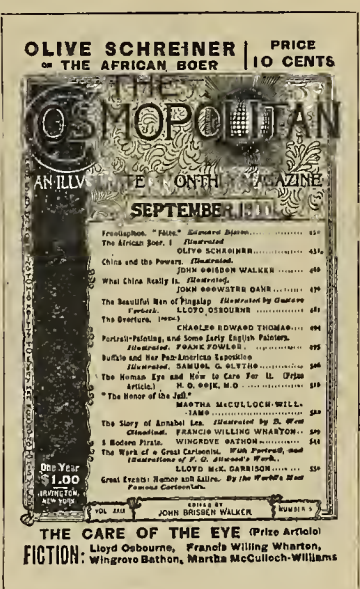
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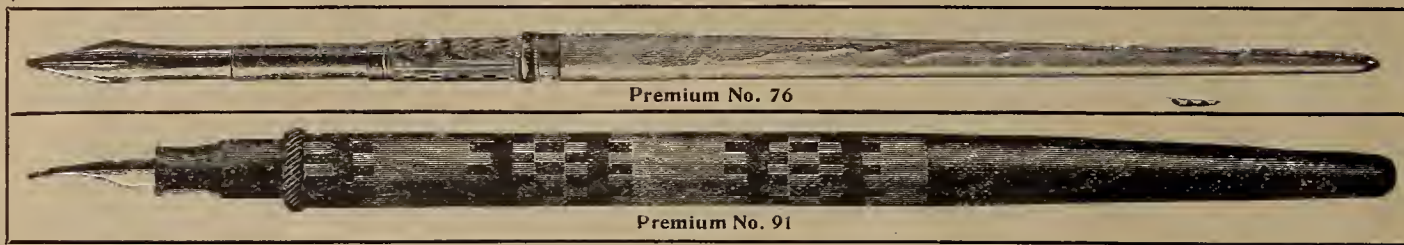
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We Will Send the Farm and Fireside One Year and Either of These Pens for \$1.00

(When this offer is accepted the club-raiser may have the regular cash commission or the name may be counted in a club)

Either one of these pens given as a premium for FIVE yearly subscriptions to the Farm and Fireside.

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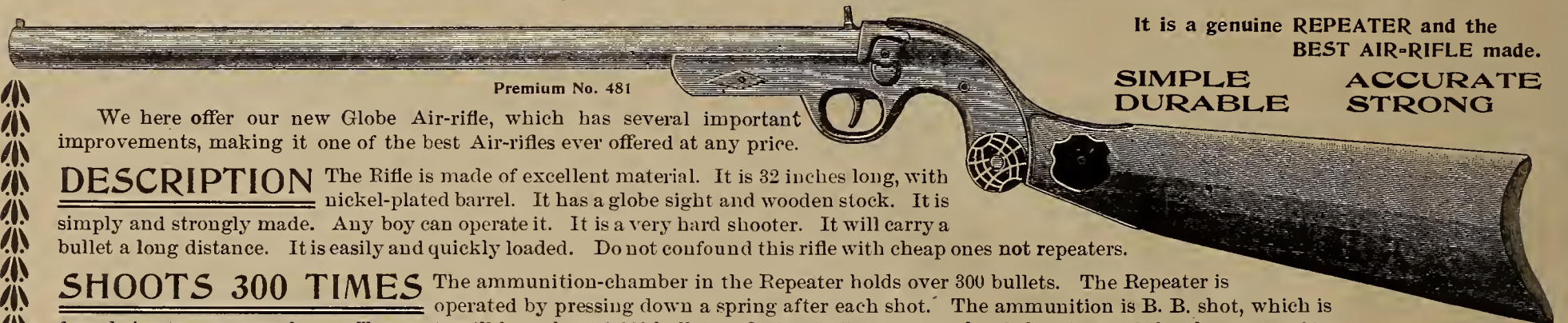
has a pearl handle, a gold nose and solid gold pen. Length 6½ inches. Sells in stores for \$1.50.

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Given as a premium for SIX yearly subscriptions to the Farm and Fireside.

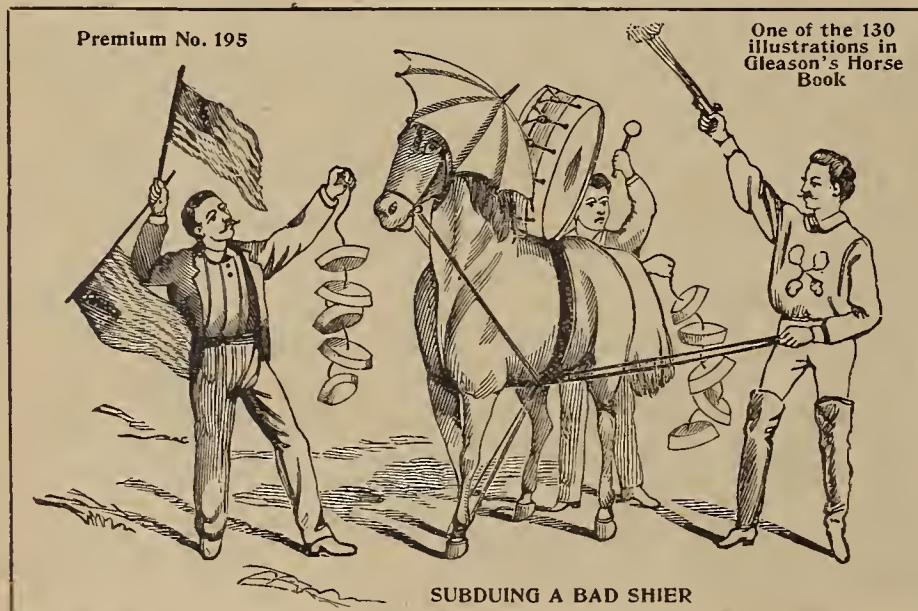
SHIPPING DIRECTIONS.—The rifle must be sent by express, charges to be paid by the receiver in each case. The express charges will be from 25 to 50 cents—generally 25 to 35 cents, according to the distance. When packed ready for shipping each Rifle weighs a little less than four pounds. In ordering do not fail to give express-office if different from post-office address.

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Professor Gleason is renowned throughout America as the most expert and successful horse-trainer of the age. For breaking colts, conquering vicious horses and training horses he is a perfect wonder. His methods are simple and sensible, and can be put into use by any young man on the farm. To any one who has colts to break this book is worth a hundred times the price we ask for it. This book is used by the United States cavalry as the one great authority on horse-training. The people and the newspapers praise Professor Gleason and his system of horse-training wherever he appears.

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THE TEETH.—Explaining reliable methods of telling the age at various stages, care of the teeth, etc. (Profusely illustrated.)

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DISEASES OF THE HORSE.—Causes and principles of all the different diseases to which the horse is liable, aggregating over four hundred, with full and reliable instruction regarding treatment and medicines for cure of them, etc.

We Will Send the Farm and Fireside One Year and Gleason's Horse Book for 40 Cents

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Given as a premium for TWO yearly subscriptions to the Farm and Fireside.

Address FARM AND FIRESIDE, Springfield, Ohio

THE FARM AND FIRESIDE



EXPERIMENT FARM AND ORCHARD

INDUSTRIAL WORK IN THE SOUTH

PRACTICAL OBJECT-LESSONS FOR FARMERS

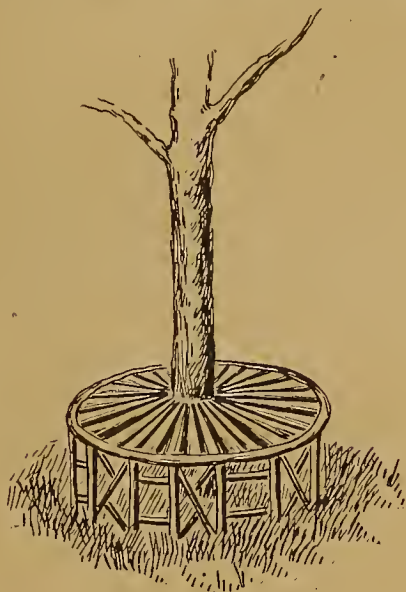
By George R. Knapp

FOR several years the writer has urged, in the columns of this and other farm journals, the advantages of the home experiment plot—a section of the farm where each farmer could test for himself the value of the new varieties in grains, fruits, vegetables and grasses, one or all, and thus demonstrate beyond question the value to him of the new applicant for public favor. Our experiment stations have been, and are, of immense value along lines on which they work, and yet, with the wonderful diversity of soil and even of climate in the area covered by each state, it is plainly seen that the work of each station has its greatest value to those whose soil and climatic conditions most nearly approach those of the station farm. Supplement this station work by the individual experiment plot and we come nearer to a solution of what our farms are best suited to raise than by any other method.

The work of the Seaboard Air-line, a railway covering a portion of some of the Southern states, along the line of experiment plots is exceedingly interesting, demonstrating as it does the advantages of small plots for experimental purposes, and showing conclusively the interest taken in experiment work by the farmers and fruit-growers when once they realize the advantages to be gained by frequent observation of different varieties growing side by side in the same soil and under the same method of culture.

In railroad operations, as is generally known, the road-bed is in charge of a specified number of men working under direction of a competent foreman, the duty of the men being to see that the road-bed, ties, or sleepers, rails and switches are kept in the most perfect condition possible. The section of road covered by each gang of men varies in extent on different roads, I believe, but on the road mentioned each gang of men is expected to take care of ten miles of road-bed, whether the tracks be one, two or more in number. The management of the railway mentioned supplies each section foreman with a little cottage, for the use of himself and family—a home—and around each of these cottages are several acres of ground which are devoted to experimental purposes. Here are planted fruit-trees and plants, grain and grass-seeds of the varieties and classes best suited to the section. The necessary trees, plants and seeds are furnished by the management of the railway, put in under the direction of an experienced person, but cared for entirely by the family of the section foreman, assisted by the man himself during his leisure hours. These experiment plots, being ten miles apart, bring one of them within five miles of any farmer in the section, and right royally are these farmers taking advantage of the opportunity offered them to see how the several varieties of fruits, grasses, vegetables and grains compare grown side by side and on soil which cannot differ very materially from that

on their own farms. This shows plainly that the average farmer is interested in experiments that tend to improve his condition in any way, and to enable him to make the farm pay a larger profit by the introduction of better varieties, or of varieties better suited to the soil and conditions he has to give them. This being the case, the natural question is, Why does he not take more kindly to the home experiment plot? There



TREE-PROTECTOR

seems to be but one reason, and that is his dislike to give up any portion of the soil to experiment purposes upon which he might grow crops that would bring him in money return. And yet this is not a fair reason, for be it remembered all the compensation derived by the workers on the experiment plots around the railway section houses is the crop, whatever it may be, and that this is

deemed sufficient is proven by the interest taken in the plan and the work by every member of the family.

To bring the plan closer home to the reader, let me say that no large area would be required for the home experiment plot—a few acres at most—and crops from this area might be treated as is the product from the kitchen garden, an addition to the larder of the family rather than a crop or crops for the market.

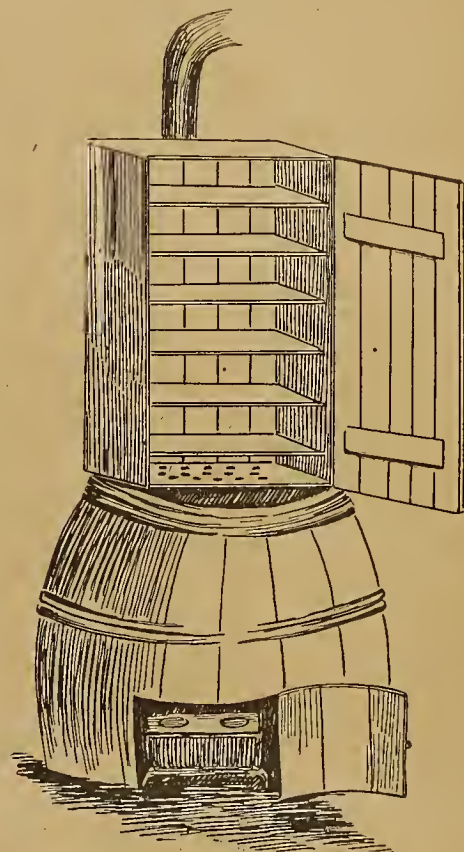
Then, again, our railway friends go farther than these experiment plots in their efforts to help the farmers along the line of their road to help themselves. On their "school on wheels" they carry agricultural implements of all descriptions, a road-making machine, and men of ability in various lines of agricultural work, who, by actual use of these and other implements in the field, on the road or in the barn, demonstrate their uses and value in practice. The road-making machine breaks the stones and makes a stretch of road before the very eyes of the farmer, and leaves it there as an object-lesson which he cannot escape. The result is he soon realizes the value of good roads and is willing to do his share in having them.

The butter expert operates the separator, and its value is shown in such a way that it is beyond question; and hence this valuable adjunct to the dairy soon comes into general use, to the unquestioned profit of the farmer. And so on through the list, teaching the value of methods new to them, but well tested, and improved appliances—object-lessons so forcible and so convincing that there is no escape from them; it thus becomes only a question of time when these lessons bear fruit, to the everlasting benefit of the farmer.

Nor are the waste products, so to speak, lost sight of. Every effort is made to induce the rural resident and his family to improve and beautify the home grounds while not neglecting the more serious problems of life. Not only this, but special stress is laid on the fact that many of these improvements, as well as conveniences for use on the farm proper, can be had at the expense of a little time and the materials at hand, spending little or no cash. Here again is the forcible and convincing object-lesson brought into play. From the assembled gathering a boy of twelve or fourteen years is selected, and under the direction of an expert proceeds to make a crude but practical fruit-drier from old barrels, boxes, a little wire and scraps of iron. Indeed, all essential parts are put together by the boy, in full view of the assembled populace. What is the result? Why, every farmer who sees this boy make the fruit-drier says to himself, "If Jimmie Brown can make a fruit-drier I guess I can," and he puts the plan in operation at the first opportunity; nor considers himself

up to date unless he constructs a much better fruit-drier than did Jimmie Brown. This means less fruit, for which he has no near-by market, going to waste, for he has found a way to preserve it. Then there are the little ornamental seats, the tree-protectors, the supports for vines and the dozen and one other things that go to improve the farm home. Crude, it is true, but all a vast improvement over the former uncared-for appearance of things which so clearly defines the line between thrift and shiftlessness.

While all this work is done under the general direction of experienced men, it is at the instigation and at the expense of members of a corporation who presumably are first of all railroad men;



FRUIT-DRIER

but they realize the importance of happy, progressive and contented settlements of people along the line of their road, and see that it needs but a slight spur to awaken their interest in the possibilities of the greatest success from progressive, intelligent and well-directed effort. They need but to be the guide, to walk a little way along the strange road; soon the path becomes clear and the awakened ones can travel it alone. While all this is the work of a great corporation (would there were more like it), which leaves in its wake improved homes and farms, its main value, to my mind, is that its lessons are along the lines that are easily followed by the pupils when the teacher has gone. There is not in the entire [CONCLUDED ON PAGE 8 OF THIS ISSUE]



SECTION HOUSE AND PORTION OF EXPERIMENT GROUNDS

FARM AND FIRESIDE

PUBLISHED BY

THE CROWELL & KIRKPATRICK CO.

147 Nassau Street,
New York CityOFFICES:
Springfield,
Ohio204 Dearborn Street,
Chicago, Illinois

Subscriptions and all business letters may be addressed to "FARM AND FIRESIDE," at either one of the above-mentioned offices; letters for the Editor should be marked EDITOR.

TERMS OF SUBSCRIPTION

One Year - (24 Numbers) - 50 Cents
Six Months - (12 Numbers) - 30 Cents

The above rates include the payment of postage by us. All subscriptions commence with the issue on press when order is received.

Subscribers receive this paper twice a month, which is twice as often as most other farm and family journals are issued.

Payment, when sent by mail, should be made in Express or Post-office Money-orders, Bank Checks or Drafts. WHEN NEITHER OF THESE CAN BE PROCURED, send the money in a registered letter. All postmasters are required to register letters whenever requested to do so. DO NOT SEND CHECKS ON BANKS IN SMALL TOWNS.

Silver, when sent through the mail, should be carefully wrapped in cloth or strong paper, so as not to wear a hole through the envelope and get lost.

Postage-stamps will be received in payment for subscriptions in sums less than one dollar, if for every 25 cents in stamps you add one-cent stamp extra, because we must sell postage-stamps at a loss.

The date on the "yellow label" shows the time to which each subscriber has paid. Thus: Nov 1900 means that the subscription is paid up to November, 1900; Dec 1900, to December, 1900, and so on. When a coin-card order-blank is inclosed with your paper it means your time is out and is an invitation to you to renew.

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When renewing your subscription, do not fail to say it is a renewal. If all our subscribers will do this, a great deal of trouble will be avoided. Also give your name and initials just as now on the yellow address label; don't change it to some other member of the family; if the paper is now coming in your wife's name, sign her name, just as it is on the label, to your letter of renewal. Always name your post-office.

The Advertisers in This Paper

We believe that all the advertisements in this paper are from reliable firms or business men, and do not intentionally or knowingly insert advertisements from any but reliable parties; if subscribers find any of them to be otherwise we should be glad to know it. Always mention this paper when answering advertisements, as advertisers often have different things advertised in several papers.



IN THE Year-book of the Department of Agriculture for 1899 Assistant Statistician Holmes concludes an article on the progress of agriculture as follows:

"Between 1855 and 1894 the following changes took place in the cultivation of corn. The time of human labor required to produce one bushel of corn on an average declined from four hours and thirty-four minutes to forty-one minutes, and the cost of human labor to produce this bushel declined from thirty-five and three fourths cents to ten and one half cents.

"In the earlier years the plow and harrow of that period were used; the check-rows were marked with the shovel-plow; the seed was dropped by hand from a bucket or pouch carried by the farmer and covered with a hoe; the cultivating was done with a shovel-plow; knives were used for cutting the stalks from the ground by hand; husking-pegs were worn in the hand in husking; the stalks, husks and blades were cut into fodder with an old-time machine turned by hand, and the corn was shelled by hand either on a frying-pan handle or on a shovel or by rubbing the cob against the unshelled ears.

"A radical change had taken place in 1894. The earth was loosened with a gang-plow, and a disk-harrow very thoroughly pulverized it. A corn-planter drawn by a horse planted the corn, and the top soil was pulverized afterward with a four-section harrow.

"When it came to harvesting the corn a self-binder drawn by horses cut the stalks and bound them, and the shocks of stalks were then hauled to a machine which removed the husks from the ears and in the same process cut the husks and the stalks and the blades into fodder, the power of the machine being supplied by a steam-engine.

"Then came the shelling of the corn, which is one of the marvels of the changes that have been wrought by machines. In this case the machine operated by steam shelled one bushel of corn a minute, while in the old way the labor of one man was required for one hundred minutes to do the same work.

"The use of steam as a substitute for horse-power in plowing, in harvesting and in threshing wheat has not materially contributed to economy except from a saving due to the elimination of animal power, so the more common power supplied by horses is here selected for the comparison. The years in contrast are 1830 and 1896.

"It is one of the marvels of the age that the amount of human labor now required to produce a bushel of wheat from beginning to end is on an average only ten minutes, whereas in 1830 the time was three hours and three minutes. During the interval between these years the cost of human labor required to produce this bushel of wheat declined from seventeen and three fourths cents to three and one third cents.

"In the contrast thus presented the heavy, clumsy plow of the day was used in 1830; the seed was sown by hand, and was harrowed into the ground by the drawing of bushes over it; the grain was cut with sickles, hauled to a barn, and at some time before the following spring was threshed with flails; the winnowing was done with a sheet attached to rods, on which the grain was placed with a shovel and then tossed up and down by two men until the wind had blown out the chaff.

"In the latter year, on the contrary, the ground was plowed and pulverized in the same operation by a disk-plow; the seed was sown with a mechanical seeder drawn by horses; the reaping, threshing and sacking of the wheat was done with the combined reaper and thresher drawn by horses, and then the wheat was ready to haul to the granary.

"Hay is the next selection for comparison, the years being 1860 and 1894. When men mowed the grass with scythes, spread it and turned it over for drying with pitchforks, when they raked it into windrows with a hand-rake, cocked it with a pitchfork, and baled it with a hand-press, the time of human labor required a ton was thirty-five and one half hours; but when for this method was substituted a mower, a hay-tedder and a hay-rake, and hay gatherers and stackers drawn by horses, and a press operated by a horse, the time of human labor was reduced to eleven hours and thirty-four minutes, while the cost of human labor from the earlier to the later year was reduced from \$3.06 to \$1.29.

"The more noticeable economy in hay-making is in the mowing and curing of the grass. In these two operations the time of human labor declined a ton from eleven hours to one hour and thirty-nine minutes, while the cost of human labor declined from eighty-three and one third cents to sixteen and one fourth cents.

"The potential saving in the cost of human labor on account of improved implements, machines and processes, at the rate a bushel or a ton, as the case may be, has been computed for seven of the principal crops of 1899; the comparison is between the old-time methods of production, in which hand labor was assisted only by the comparatively rude and inefficient implements of the day, and the present time, when hand labor has not only the assistance of highly efficient and perfected implements and machines, but has been considerably displaced by them. The saving in the cost of human labor in cents, a unit of product, permits a very forcible statement of its equivalent in money by means of a computation consisting of the multiplication of the saving a unit into the crop of 1899. The result expresses the potential labor-saving in the production of seven crops of that year, and is not an aggregate of the saving of human labor in the cost of producing the crops for all of the years between the earlier and the later ones, during which time this economizing and displacement of human labor has taken place. In the case of the crop of corn the money measure of the saving of human labor required to produce it in 1899 in the most available economic manner, as compared with its production in the old-time manner, was \$523,276.642; wheat, \$79,194.867; oats, \$52,866.200; rye, \$1,408.950; barley, \$7,-

323.480; white potatoes, \$7,366.820; hay, \$10,034.868.

"The total potential saving in the cost of human labor for these seven crops of 1899, owing to the possible utilization of the implements, machines and methods of the present time, in place of the old-time manner of production, reaches the stupendous amount of \$681,471,827 for this one year."

IN "Munsey's" for October Mr. Hartley Davis describes Tammany Hall as the most perfect political organization in the world, and tells how one man is able to control absolutely more than one hundred thousand votes.

"As a matter of fact, Tammany Hall," he says, "is not a political party. It is an association of men who make a business of politics. They devote three hundred and sixty-five days in the year to it. They are governed by no ethical considerations. They are not burning with a patriotic desire to save city or country. The Tammany politician is in politics for what there is in it, wherein he is like most politicians. He frankly admits this, wherein he differs from most of them.

"The Tammany system is the growth of a hundred years. There are no theorists within its ranks. In it 'piratical politics' is seen at its worst and at its best.

"A student of political economy might attribute Tammany's power to the absolute autonomy of the component bodies and their close organic relation to the whole. A member of the organization would explain it by saying that 'Tammany takes care of its own.' Both would be right. Tammany is a curious mixture of the patriarchal and the republican systems.

"There is but one place where the secret of its power can be studied—in the election district. The primary purpose of the whole machine is to get votes. Its force rests simply and wholly on votes. The captain of the election district is the man who actually gets them.

"Richard Croker was once captain of an election district; so was John F. Carroll. Of the thirty-five district leaders all but two began their political careers in this way. Nine men out of ten who have gained any prominence in the organization served their apprenticeship as district captains. Until a few years ago the captain was the unit of power. He fought his way to his position because he was the best man, but now this distinction more properly belongs to the district leader, who selects the district captain, instead of accepting him. The leader is thus surer of his subordinate.

"It is commonly said Tammany Hall is powerful because it controls the city government. Manifestly it could not control the government if it did not control votes. The patronage it possesses is enormous. It is impossible to give exact figures, but the best estimates place it at \$35,000,000 yearly. The income of the big men in Tammany Hall is not measured by their salaries. The men who receive the best places are the most valuable to the organization; that is to say, those who control votes, who can 'deliver the goods,' according to the expression.

"Of the thirty-five district leaders of Tammany Hall twenty-nine hold public office. Their salaries are from four to eight thousand dollars a year—except the assemblymen, who draw only fifteen hundred, besides mileage. Of the remaining six all but one have held office almost continuously, and their retirement to private life is probably only temporary. These district leaders get their offices for three reasons: They must be rewarded for the work they have done; they must be able to devote a large part of their time to their districts; and lastly, they must be in a position where they can distribute patronage among their followers. To the leader who thinks that gaining a coveted office entitles him to rest at ease punishment comes quickly and vigorously.

"Tammany Hall knows the name of every householder and every tenement-dweller on Manhattan island. If he be well-to-do, a person of influence, Tammany Hall knows his interests. It is a part of the business that every district leader should find out the vulnerable points of a man in his territory. Methods are adapted to conditions, and in what Tammany Hall calls the 'silk-stocking districts' there is no house-to-house canvass, no personal solicitation. A man's business often offers opportunity for the organization to gain its ends. Possibly he can be won over by the social aspirations of his wife, for this mighty machine has influence in the most fashionable circles. Absolutely nothing is neglected that may gain results. If Tammany Hall is seriously bent upon having a man on its side he is likely either to succumb or to suffer in a hundred ways. But as a rule comparatively little attention is paid to the silk-stocking districts. The vote there cannot be classed as controllable, and it is the vote which the commander-in-chief of the machine can hold in the hollow of his hand that Tammany seeks. The tenement is his stronghold."

B RADSTREET'S under date of September 15th says:

"Expanding demand at advancing prices in many lines of trade finds its chief exemplar in the market for raw cotton, which has witnessed the greatest excitement, heaviest trading and largest gain in the price for at least a decade. Rarely, if ever, in the history of the trade, as conducted on modern lines, has the interest displayed in that product been greater, and the manufacturing interests of the world find the situation a perplexing one, while the prospects of large profits to producers are stimulating all lines of Southern trade. English spinners, who are reported very generally short of supplies, are considering drastic methods of meeting the requirements. In American cotton goods the situation, from being a short time ago a buyers' market, is now reversed, and sellers are in a position to dictate terms. So suddenly has the outlook as viewed by the trade generally changed, however, that manufacturers are unable or unwilling to define their exact position, or if they accept new business, do so on a distinct basis of cost of new supplies. The Fall river print-cloth committee withdrew from the market. The last recording quotations show a slight advance on the rates long ruling. Maximum cotton-crop estimators of past years are apparently panic-stricken and predict famine stocks for the end of the year even with reduced consumption. Trade estimates, based on government reports, point to a crop of 9,500,000 to 10,000,000 bales, the latter only possible, however, if the picking season is long and frost is delayed. Bull estimates of consumption are that 11,000,000 bales of American cotton was needed, but these may perhaps be reduced, not only because of the impossibility of such a yield being gathered, but also because higher prices of cotton and cotton goods are expected to reduce consumption."

AN examination of the year's record shows that manufacturers have made the largest increase, the exports being \$75,000,000 greater than in 1899.

"In agricultural exports the increase is \$50,000,000; mine products nearly \$10,000,000; forest products, \$10,000,000, and fisheries, \$2,000,000. The total exports of manufactures of iron and steel amounted to \$120,000,000, twenty per cent increase over 1899. The imports for the year will be in the neighborhood of \$850,000,000, thus insuring a trade balance for the year exceeding \$500,000,000."

ABOUT half of all the cotton goods we sell abroad goes to China, which purchased last year over \$10,000,000 worth of our sheetings, drills, jeans and other grades. They are landed in Shanghai, and ninety per cent of the goods is forwarded at once to Chefoo, Tien-tsin and Newchwang for the North China markets. A little over six per cent is sold in cities up the Yangtse river and the remainder is consumed in Shanghai and its neighborhood.

ABOUT RURAL AFFAIRS

Milk-can Incendiarism

One of the experiment-station savants to whom the question of milk-can incendiarism was referred by the "Rural New-Yorker" expresses in a recent issue of that paper the opinion that "it is impossible for a milk-can to focus the sun's rays in such a way as to set fire to anything." The "Rural New-Yorker" editorially also seemed to take that view, and I could not help writing to that paper citing a certain quotation from Shakespeare: "It is surely true that there are things between heaven and earth not dreamt of in your philosophy." In his reply to me friend Collingwood, who happened to be in a humorous mood, says:

"Now, then, Brother Greiner, I want to tell you that I am sorry you fellows have been able to show that the milk-can can be an actual fire-bug. Great heavens, man, do you understand what this is going to result in? Lots of farmers will argue in this way: Milk-cans set things on fire. Water puts fire out. Therefore, we must always add water to a milk-can, and in order to be sure about it let us fill it one third full of water before we put in the milk. Now, then, you see what is going to happen as a result of your publishing these facts to the world. Don't you think that the standard of milk is low enough now without giving farmers a logical reason for adding more water to it? But speaking seriously, I am surprised to think that there is anything in this idea that a milk-can, by focusing the sun's rays on a point where there is some inflammable material, can actually start a fire; but at the same time I am glad to have the truth brought out, and expect now to get a number of cases where this thing has really happened."

There can hardly be much profit in arguing the possibility or impossibility of this thing when the possibility is so easily demonstrated. If our experiment-station folks, instead of reasoning and arguing from a scientific standpoint, would experiment with a few bright new tin cans as they are usually constructed and some punky wood in bright sunshine they could soon learn the truth and demonstrate the possibility of starting a blaze by means of sun's rays focused from the bright, concave bottom of the can, as I demonstrated it once to the doubting wife of the neighbor whose wood-pile I discovered on fire (set by the milk-can). One such demonstration ad oculus is worth a hundred arguments and declarations ex cathedra.

The Apple Trade

How things do change! Only a few months ago I thought I was going to have the biggest apple crop on record, and doubted my ability to find buyers at anything like acceptable figures. I now find that I do not have even a fair crop. The Greenings, one of my leading winter apples, are mostly off the trees, and barreling stock is sure to be scarce. Baldwins are partially on the ground, too, knocked off by the high winds, and while the trees—in places, at least—appear to have yet a good many apples on them, the larger proportion is so small as to be fit for cider stock only; and buyers will find that good barreling stock of this variety will also be far less in quantity than has been estimated by the people at large. The fall fruit, such as Gravensteins, Twenty Ounces, Kings, Fall Pippins, St. Lawrence, etc., has been taken with avidity by apple-buyers at fair prices, and is practically out of the market. Fancy fruit is not abundant; the Spys are fine, but only half of a crop, and they will undoubtedly find a ready market at good prices. I could sell them now at \$1.50 a barrel, but hold them either to make them sell Greenings and Baldwins, as most buyers like to have a variety when buying, or for a higher figure.

A reader in Pennsylvania, B. M. S., asks me a whole string of questions in regard to my apple trade, and expects me to reply by letter. I will answer a few of these questions in a general way here. I know but little about the apple-canning business, except that it is a big industry, and can only be made financially successful by the big concerns who make use of labor-saving devices and have everything arranged in a systematic way, so as to reduce the cost of running such a plant, and therefore the cost of producing canned goods to the very lowest figure. Of course, the apple-canners try to buy apples at the best terms they can secure. Last year they paid us seventy cents a hundred pounds for the entire crop, with culls thrown in. This year the outlook is for a price of about forty cents a hundred pounds. They will buy only in a few favored localities, no doubt. This price (forty cents a hundred pounds) is equal to nearly sixty cents a barrel for the fruit, including firsts and seconds, and if it had to be barreled, the barrels costing thirty cents apiece and the labor of packing not less than fifteen cents a barrel, equal to \$1.05 a barrel. As a matter of fact, I can afford to sell my apples to the canning-house at forty cents a hundred rather than sell to regular apple jobbers at \$1.25 a barrel.

Wheat for Fowls

It is very doubtful, in my estimation, whether a better food for chicks as well as for older fowls could be found than whole wheat. And it is comparatively a cheap food, too, so long as we can get best quality at about seventy-five cents a bushel, and second grade at from fifty to sixty cents a bushel. Sometimes I have made wheat almost an exclusive ration for young chicks for weeks at a time, besides what seeds, bugs, worms and green stuff they could pick up on a free range, and I have always been pleased with the returns. Chicks fed on whole wheat grow quite fast. This spring I have not had the wheat to feed, and my hens did only moderately well in laying. For a few weeks now I began feeding wheat again, both to the young and the older stock, and hardly had I begun this when the little chicks began making a much more rapid growth; and how the hens do shell out the eggs!

Vinegar and Other Queries

For the quickest and best way of turning cider into vinegar, first make good cider, selecting sound and clean apples, with a proportion of sweet ones among them. Put the cider into old vinegar-barrels, to be kept in the warmest place you can find for them, and be sure to fill up the barrels as fast as the stuff runs out of the open bung. When thoroughly fermented drain the clear cider off, clean the barrels from the settlings by rinsing, and then fill each barrel about half full, adding a little rain-water, and thus leave it in a warm place, with bung open, but covered with fine wire screen to keep out flies and dirt, until the final transformation into vinegar. I can make excellent vinegar in this way in a comparatively short time. The process can be still hastened by putting a few gallons of good vinegar into the barrel before filling it up with the fermented cider. This is an easy and safe way for farmers to make vinegar, although a regular manufacturer could still hasten the process by various means; such, for instance, as to let the cider pass slowly through a spout or box loosely filled with shavings soaked in vinegar. A large proportion of the commercial vinegar now sold in our grocery-stores is nothing more than diluted acids, and a fraud and abomination. With the immense lot of apples blown off the trees by the big storm in September, and the large crop of undersized Baldwins at this time still on the trees,

there is no reason why every family in the land should not have a chance to get the genuine cider vinegar before another summer.

The same inquirer asks about "Otwell's tree-paint," a wash claimed to be a preventive of borers. I have not tried it. From experience, however, I know that alkaline washes are a good thing, both to drive borers away and to invigorate the tree. A piece of soap placed in the crotch of a tree in such a way as to have it remain there until slowly dissolved by the rains, and the suds carried down the body of the tree to the ground, seldom fails to have markedly good results. I have once made good trees out of a number of Wagners that were badly borer-eaten and had not made much visible growth for some years, by dashing the hot soap-suds on washing-days during the winter by the pailful against the bodies of the trees as high up as I could reach. The effect was wonderful, almost magical. I would not put much reliance in patented remedies.

Best Poultry Food

A certain "Stock Food Co." writes a private letter, saying that "we have the best stock food on the market, and are about to add a poultry food to our line, and, of course, it must be the best, also. Send us the formula for what you believe to be the best poultry food, and we will send, express prepaid, a pound package of our celebrated X stock food. To the one sending the best formula we will give \$5 in gold." I have not much use for these various patented preparations sold in one to ten pound packages at a high rate. There is nothing mysterious about stock-feeding. It will be very hard to find a better single food for poultry than good whole wheat, with occasional changes to oats, corn or other grains. We have to supply certain elements in certain proportions, in order to supply perfect nutrition. The patented "poultry foods" are not properly foods, but belong to the category of condition powders. I am not spending much money for them.

T. GREINER.

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SALIENT FARM NOTES

Riding Implements

A few days ago a young farmer came along the road sitting on a sulky-plow he had just purchased, and when opposite where I was at work he called, "Come over here and take a look at this!" As I came up he said, "You see, I have been reading your writings and have taken your advice. You said that a man can't work like a slave and do good thinking and planning, nor give his stock the care and attention it should have, and experience has taught me that you are right. I've walked after plows until every bone and muscle in my body ached, and I could have lain down in the furrow and slept like a log. When one is worked down like that what condition is he in to do his feeding and other chores? He just gives them a lick and a promise and goes to bed. This plow cost considerable money, but I think I will get it all back through being able to do better thinking and planning, giving my stock better care and having a better garden. I think I am justified in going to this expense—in buying implements that I can ride if I can do good work with them and save myself for the thousand and one chores and odd jobs that should have attention when the day's work in the field is done. Don't you think I am right in going to this expense? Wouldn't you do the same under like circumstances?"

It was plain that the young man felt that he had been a little extravagant, and he wanted some one to tell him he had not—that he had done the right thing, even if he had given his note for the implement. I told him that he already knew what I thought about such matters. The man who is overworked is certain to neglect, or at least slight, his stock, forsake his garden and overlook many small but important matters, while it is impossible for him to think clearly or plan wisely. In buying farm implements it pays to buy the

best, and when one can do as good work with an implement he can ride as he can with one he has to walk after he should by all means buy the former, even if it costs a third more. When one is not worn out with hard work in the field he can attend to hundreds of small jobs at noon and evening, and in one season save two or three times the extra amount paid for the riding implement. If the riding implement requires another horse, by all means get the horse and save yourself. It will pay.

Preparing Corn-stubble for Wheat

P. J. W., Delaware, asks how best to prepare corn-stubble for wheat. He does not say whether he means winter or spring wheat. In this winter-wheat section I usually drill the wheat between the rows of corn-stubble, and when the ground is frozen hard in winter rub the corn-stumps off with a heavy pole-drag. If the stubble is plowed under the wheat-plants are very apt to be heaved out by alternate freezing and thawing. I find that the less the land is stirred in the fall the less will the plants be heaved by frost in winter. It is rather late to sow to winter wheat now. If I had the land I would employ it at once and sow to oats as early in spring as I could get a team over it, harrowing it thoroughly after sowing. The tract of oats-stubble now covered with a rank growth of ragweed I would plow at once, running the plow at least six inches deep and using a chain to drag the weeds down into the furrow and bury every particle of them. Next spring I would plant the field to corn. The rank growth of ragweed shows that there is considerable fertility in the soil, and with the aid of a dressing of manure applied during the winter, or of fertilizer applied at planting-time, he should grow a good crop of corn next year. I would follow the corn with cow-peas. If he has no experience with alfalfa, it would be best to try only a small plot, sowing in the spring. The best fertilizer that can be applied to a timothy meadow is well-rotted barn-yard manure. It should be applied in the fall or early winter.

Tulips

It is not too late to plant tulip-bulbs. A bed six or eight feet in diameter, filled with early and late single and double tulips, is a glorious sight in spring. When they come into bloom the young grass is a bright green, and the combination of emerald and dazzling colors makes an impression on the minds of children that time cannot efface. Very rarely do we see a good bed of tulips on a farmer's lawn. The bulbs are cheap, and no one is better fixed to have a good bed of them than the farmer, and yet I believe one can find a thousand of these beautiful, easily grown flowers in towns and villages to one in the country. The farm home will not be attractive unless we make it so; and the farmer can, if he will, make his home more attractive with less labor than the villager, because he has everything needed right under his hand. Tulips may be left in the ground three years, and lilies five or more. The phloxes and many other perennials will do well in one place three years or more, while most of our brightest flowering shrubs increase steadily in beauty for ten years or more after planting. Why not have lots of them, and make home more attractive?

Most farmers plead that they do not have time to plant and attend to these things, yet these same men will spend days and nights attending fakir picnics, party rallies and horse-races, and spend more money at one of them than would buy enough bulbs and plants to make their homes the most attractive spots on earth. And the reason the boys do not take more interest in these things is because "pap" takes none. Plans for fixing up the yards and lawn are not discussed in the home. In most cases the principal object of the "men-folks" is to get the work on hand done and go to town "to hear the news." If Mrs. S. S. will try to induce "the men-folks" to discuss these matters with her at meal-times probably she can get them sufficiently interested to help her make her lawn attractive. Try it.

FRED GRUNDY.



FARM THEORY AND PRACTICE

CLOSE ATTENTION TO BUSINESS.—A summer assembly, conducted upon the Chautauqua plan, was being held in one of our Northern states for a month, and the management provided for a "farmers' day." The farmers of the surrounding country were given an especial invitation, and a program was prepared with their interests in view. When one of the lecturers for the day was being introduced the chairman told the audience that while their speaker was a farmer they must know that he was not of the sort that had to see to the work of farming, but spent nine tenths of his time out in the world addressing conventions, etc., and that he was therefore capable of instructing farmers. This poor man imagined that he was putting his lecturer upon a good footing by such an introduction, and made plain his belief that an actual farmer could not be expected to speak acceptably to an audience. Reference is made to this incident because it is consistent with the views of thousands of ill-informed people. Putting aside the question of ability among actual farmers to speak in an interesting and acceptable manner from a public platform, the point of interest now to me is that any educated man could suppose that farming calls for so little skill that one can conduct the business with marked success and yet be away from it nine tenths of the time. One must either be close to the work or else hire some one with brains and skill to manage; and in the latter event the credit both for the success and for the knowledge of farming displayed would probably belong to the latter. In farming, as in all other kinds of labor calling for a high degree of intelligence, supervision at long range rarely wins.

THE PUZZLING QUESTIONS.—The farmer who is looking for the most profit from his investment in land, live stock and crops finds his work full of puzzles. He cannot find the "why" in many of his past results, and there appears to be inconsistencies because he fails to unravel all the influences at work, leaving him in doubt scores of times every season. A man is led finally to plant two varieties of potatoes, wheat or corn. The harvest shows that if he had planted the best variety only the income would have been one hundred dollars more. This often happens. What can be rationally expected from certain breeding animals? What investment in commercial fertilizer for a certain crop will give most net profit? Minor questions come up daily. What kind of labor and how much will pay best on this crop and that one, everything considered? The best informed drop dollars of possible income right through the season. It is only a question of how many. How far short of the best net returns will we come this year, and how nearly can we master our business eventually? That we lose by gross mistakes none but the careless fail to see. The possibilities before us give farming a charm that is not known to the man working for wages. There is constant room for improvement and constant chance to make more income reasonably certain. These problems are mastered only by close personal contact with the work. If the owner does not do part of it, he must see just how it is done. It is out in the field that the details are worked out. There is a right way and a wrong way for each day, and the man who farms for profit must know as nearly as is possible that the right way is being employed.

TESTING THEORIES FOR TRUTH.—The theoretical man has no standing with the man who prides himself upon being practical. The theorist may know a great deal, but he knows too much that is not true for the conditions under which they are applied. On the other hand, there is no credit to any one in

being practical if the practice is bad. The level-headed, progressive farmer to-day is one who is studying the theories of advanced thinkers, trying slowly to sift out the truth as applied to his conditions. The more successful he has been along any one line the more eager he is to get new light and to make greater improvement. He is practical, discarding much because it will not serve him; but he does not set up his old methods as objects of daily worship. After study of a station bulletin or a book written by an accepted authority along a certain line of agricultural investigation he sees where he should change his thinking slightly, and his method is modified accordingly. It is no wholesale acceptance of novel ideas and methods, but it is acceptance of what seems clearly to be an improvement.

NATURE-STUDIES.—It is a pleasure to note the headway being made in the introduction of natural history into our public schools. Courses of study have been outlined for children of all ages that bring to them the facts of everyday life about them, and the best part of it is that much information comes through the child's own observation, guided by the teacher. The child learns about the birds, insects, trees, plants, soils, etc., and such information is practical. Facts are gathered that will be used all through life, the faculty of observation is trained, and at the same time the study is not irksome. The Pennsylvania department of agriculture is doing a good work in urging this line of study upon the people, and has issued some helpful bulletins. One is "Course of Nature-study for Use in the Public School," and another is "Nature-study Reference Library." The latter catalogues many books that contain a mine of interesting matter for children and grown folks, and those who have little ones to whom they read or that can read for themselves will find this catalogue very helpful in selecting books. Children are fond of books about animals of all kinds, and everything that has life interests them.

DAVID.

FEEDING APPLES TO STOCK

The apple crop is exceptionally good in this state, and buyers are not offering acceptable prices. On account of an accumulated surplus of evaporated apples and the low price the evaporators, that for several years have taken all our windfalls and inferior fruit at a fair price, do not start up at all. It is, therefore, a question what to do with these cull apples. If we do not dry them ourselves I can see no other outlet than to utilize what we can for vinegar and feed the rest to stock. Hogs will take care of a great many, but not all. I would store any surplus in a basement and feed liberally during the earlier part of the winter to horses and young cattle.

A young neighbor of mine proposes to feed several hundred bushels to his milk-cows, and he wants to purchase a root-cutter and chop up the apples before feeding. He fears his cows might otherwise choke. There is no danger in feeding apples or small potatoes to cows in so far as choking is concerned, providing an arrangement is made to keep the cattle's heads down while they are eating. This may be accomplished very easily by securing a smooth, straight pole to the stanchion just above the cows' necks after they are all in. So long as their heads are down they cannot choke. When cattle do choke it always happens when they are reaching into trees after small apples, which are then apt to roll down into their throats and lodge while the lungs are drawing in air.

The question arises, Will sour apples be of any benefit to cows in milk? Cows being kept on all dry food may be slightly benefited by small daily feeds of apples. It would probably tend to keep them in better health, but it is very doubtful whether the flow of milk will be any better.

With horses there is really no danger about their choking. I have known another friend to spend half an hour every day to very carefully and conscientiously cut every little potato he intended to feed to his three horses.

This time was all wasted. I feed all such things without cutting whatever. Even the largest beets will be eaten by cattle without any difficulty. I calculate my horses and cattle have more time to cut up their roots than I have, and their time is not all valuable.

For sheep all roots and the like had best be cut up fine, otherwise many pieces will be dropped into the litter, and when once befouled will not be eaten.

F. GREINER.

A MILK-DAIRY THAT PAYS

Denver is supplied with milk by about three hundred dairies—some of them large, most of them small. A large share of the small dairies afford their owners a comfortable living and little or nothing more. In the very nature of the business this must be so, for there are in the dairy business men of many grades of business ability. And the man has much more to do with making a dairy profitable than has his cows or his market.

I have been furnished details of the cost of running a typical dairy of the best class, as well as the items of income and profit. Every man cannot make a dairy pay as this one pays, for the skill to handle the cows successfully, to get and keep good customers, and to collect with little loss, is not common. To succeed in dairying a man needs this skill. Moreover, he should be satisfied to receive a fair income, should have the ability to be honest with his customers, and should have the courage to demand fair treatment.

The dairy under consideration consists of twenty-five Holstein cows. These, with the land owned and occupied, and the buildings and equipment, are worth \$5,500. In addition there is represented in feed and accounts \$500 more, making the necessary capital \$6,000. Four horses are used, one of them being rarely hitched to the dairy-wagon, but is necessary as a driving-horse. The owner and one hired man do all the work. Sometimes the man employed boards at home. The item of wages for the hired man also includes the cost of board.

The table below shows the items of cost properly chargeable to the dairy, except the wages of the owner, who is at once laborer, manager and capitalist. It will be seen that the dairy is charged with interest on the investment and other items covering the cost of maintaining the value of the business:

THE OUTGO

Interest on \$6,000 @ 6 per cent.....	\$ 360.00
Wages, 1 man @ \$40 a month.....	480.00
Feed of 4 horses @ \$6 a month each..	288.00
Bran, 20 tons @ \$14 a ton.....	280.00
Corn chop, 28 tons @ \$15 a ton.....	420.00
Alfalfa, 91 tons @ \$6 a ton.....	546.00
5 cows @ \$45 dollars each.....	225.00
1 horse @ \$100.....	100.00
Taxes and insurance.....	73.00
Bottles.....	36.00
Repairs.....	35.00
Shoeing.....	75.00
Deterioration, 5 per cent on \$2,000....	100.00
Losses, \$10 a month.....	120.00

Total.....\$3,138.00

THE INCOME

20,525 gallons of milk @ 25 cents....	\$5,131.25
4 old cows @ \$30.....	120.00
25 calves @ \$4.....	100.00

Total.....\$5,351.25

THE PROFIT

The total income.....	\$5,351.25
The outgo.....	3,138.00

Net profit.....\$2,213.25

But this is net profit in name only. The owner is entitled to the wages of a laborer, \$480 a year. A man who is capable of managing a six-thousand-dollar dairy and making it pay should be paid a good salary. He should also have something for his risk. Each reader may make such division as he chooses of what is called the "net profit" in the foregoing statement.

Some one will have noticed that there is no item covering the cost of keeping a bull, and some will wonder what becomes of the cow not accounted for and the extra horse. The answer is that the bull costs no more (probably) than the animal is worth; that the cow dies and the horse wears out.

It were easy to show that if a dairy worth \$6,000 yields an income of \$1,700 above all expenses except management, a dairy worth \$60,000 ought to yield an income of \$17,000, which is more than most businesses worth \$100,000 produce. But dairying is a business requiring peculiar qualifications. The dairyman of this article gets twenty-five cents a gallon for his milk because he knows how to sell it and has established a trade. Many a dairyman who sells milk that is just as good gets only twenty cents a gallon. The big dairy would probably get the latter price.

"Folks are queer. Milk customers are just as 'ornery' as they can be," said one dairyman; "you have to humor them. They expect the man who delivers milk to be a gentleman. The fact is, you cannot afford to hire a man who cannot hold your best customers." So the small dairy has advantages and the big one disadvantages.

D. W. WORKING.

AMERICAN DAIRY PRODUCTS IN EUROPE

Americans thus far have consumed practically all of the dairy products produced in America, and a considerable amount additional thereto of English and continental cheeses. But from now on the United States may be expected to enter upon a period of exportation of dairy products, as she is already doing with almost every other line of production.

For two years the Department of Agriculture has been making systematic efforts to introduce American dairy products, especially butter, into European countries, making regular cold-storage shipments to London and Hamburg. Upon the opening of the Paris Exposition special arrangements were made by Major Henry E. Alvord, chief of the dairy division of the department, to have a large and permanent butter and cheese exhibit. This showing has been a striking feature of the American exhibit, and such excellence was attained by American products that Major Alvord has been approached by several of the big butter-buyers of Paris with the request for the names of the largest producers in the United States who could furnish regular supplies from America.

Along the same line of exploitation the United States received an invitation to participate in the annual Dairy Show of the British Dairy-farmers' Association, held at London during the first week in October. This was a very important event to British dairymen, as London is the greatest butter market in the world, importing immense quantities of butter and cheese from Denmark, Canada and Australia. Some of the London butter-men buy butter by the ship-load. The Department of Agriculture invited those exhibitors who took first rank at Paris to exhibit at London, and every form and style of butter-package used in the United States that was suitable for export was shown.

A special and very complete refrigerator service was employed in the handling of these dairy products at the London show in the same manner as was done so successfully at Paris. The products were shipped from Minnesota, Illinois, Massachusetts, Vermont, Iowa, Connecticut and various other dairy states in the usual refrigerator-cars to New York City, the shipping-point. Here the department had ready to receive them special refrigerator-chests the size of a trunk. These have dead-air chambers and packings of excelsior and sawdust; also an ice-chamber each. For twenty-four hours these chests were kept in a temperature way below freezing, which thoroughly chilled them and froze the ice in its compartment. Then the butter upon its receipt was packed in the chests, which were sealed up and transported to the cold storage aboard ship, where they rested at a temperature of twenty-seven degrees Fahrenheit until they reached Liverpool. In this manner whenever the butter or cheese is out of cold storage it has a cold storage of its own which keeps it in perfect condition through any ordinary delay. Upon arrival at London the products went into the cold storage especially prepared for exhibitors.

GUY E. MITCHELL.

NOTES FROM GARDEN AND FIELD

PEANUTS AT THE NORTH.—A reader in Frewsburch, N. Y., asks me about growing peanuts, especially whether I would advise him to plant the Spanish variety, or whether some other sort would do better; also, if I think that it would pay to raise them extensively, etc. I have grown the so-called "Spanish" peanut, a small but well-filled pod growing in clusters close to the main stalk, on a small scale and with some degree of success while I lived in New Jersey and had at my command a nice piece of sandy loam. I believe that the conditions there were much more favorable for the making of fairly good peanuts than they are anywhere in New York state; but while even in New Jersey I found a good deal of pleasure in having peanuts from my own garden, and good ones, too (for the Spanish is of a better quality, it seems, than the ordinary larger peanut grown in Virginia, etc.). I could not see much promise of making the crop a profitable one from a financial standpoint. I believe, that in many places in New York state, where the land contains much sand and lime, the Spanish peanut would be a good thing to have in one's garden; that is, in a few specimens and for pleasure and information only. The children will take great interest in these plants, no doubt, and it will increase their love for the garden.

* * *

Seed is easily procured. A number of our large seed-houses advertise this Spanish variety, and possibly it might be procured from grocers or Italian fruit-stands. Of course, peanuts are shipped in the raw state and only roasted for the retail trade as wanted. The soil should be well prepared, loose and mellow and free from rubbish. Probably it would be a good plan to start plants in thumb-pots under glass, planting only one seed (half a pod) in each pot. This may be done in March or even April, and the plants transferred to open ground after danger from late frost is entirely over. If to be planted directly in the open ground, you may place the pods, or half pods, six or eight inches apart in the rows, pressing each down about an inch deep. The nuts germinate easily, and the young plants are taken care of in the same thorough manner that we manage all other garden crops. It is especially necessary to have the soil around the plants loose, so that the arms, or the branches, on the ends of which the pods form in the ground, can penetrate the surface without difficulty. After the first light frost in the fall, or earlier if the nuts are mature, the plants are pulled up, and after the soil has been well shaken from the roots, hung up to cure. The nuts may then be rubbed off the plants, and will be ready for storing or roasting.

* * *

RESETTING ASPARAGUS-PLANTS.—A reader in Kansas asks how to reset his asparagus-plants, which are of the Palmetto varieties and grown from seed planted last spring. This job can be done in the fall or spring or just when you can get at it. Always select a warm, rich spot that is a little to one side or next to other perennials, like rhubarb, raspberries, gooseberries, currants, etc., as a continuation of the small-fruit patch. All these crops go well together. They can be planted in long rows, and may receive their cultivation at the same time and as needed. Don't be afraid to use plenty of manure, ashes, fertilizers, in fact, anything in the shape of plant-foods that you can get. A "too much" is almost out of the question. Give each plant plenty of room. The asparagus rows should be at least five feet apart, or five feet away from other plants (rhubarb or bush fruits), and better six feet; and the plants should not stand closer than two feet apart in the row. Be sure you divide the plants, setting only one in a place. When grown from seed the plants often stand in bunches all matted together. If you plant such bunches the young shoots will come in great numbers, but of small size. The

plants that I would wish to set are those that have been properly thinned, and therefore are grown single. Make a deep furrow for each row, and in these set your plants carefully, spreading the roots and covering with rich, loose soil a few inches at first, and filling in gradually afterward. In this way you will grow good stalks. They should be cut only very sparingly the first year after planting.

* * *

SELLING APPLES.—An agent of one of our preserving companies a few days ago offered me fifteen cents a hundred pounds for all the apples now lying thickly under the trees in my orchards. I told him that I would rather let them rot on the ground, and would not sell them at any price unless for cider-making. That is all that rubbish is good for and should be used for. Every bushel of it sold for evaporating or preserving purposes takes the place of a bushel of better fruit that should bring from thirty to fifty cents a hundred pounds, and helps to depress the prices of all the better grade of fruit. It cannot be told too often that growers make the biggest mistake of their lives when they crowd this stuff that is only good for cider on an overstocked market, to be sold for culinary purposes. It is far better to get a fairly good price for the good-quality fruit, and let the poor stuff rot, than to get "a little something" for the latter and a miserly price for the good fruit. Yet I would like to have the apples now lying under the trees and more or less rotting picked up and out of the way for the sake of cleanliness and appearance as much as anything else. Some one came and bought a hundred bushels of windfalls for three dollars, the buyer to pick the apples up himself, from one of my friends. I am willing to sell every windfall in my orchard at three dollars a hundred pounds, just to get them out of the way. I have fed as many apples right along to my hogs as they would eat, but as I am feeding them sweet-corn now, all they can eat, they will take but few apples.

* * *

THE EGG-PLANT CROP.—Egg-plants seem to be brought to our markets in more abundant supply from year to year. They used to be very profitable for us here, and to some extent they are still remunerative. I only grow the Improved New York Purple, and have planted seed from various sources; but no matter what claims are made for this or that improved strain, I find all these strains are about the same and equally reliable. My plants always bear well during the whole latter half of the summer and up to frost. On October 10th this year I gathered a lot of specimens for market up to three, and even four, from one plant. I have still plenty of good eggs left. The plant is always an object of interest, and the fruit good for table use and good for sale.

* * *

WEEDY MORNING-GLORIES.—Many of our flowering annuals are liable to become a pest in the garden. Five or more years ago I had a trial patch of several hundred kinds of flowers from seed, and even up to this day a few of them come year after year and have to be cultivated out, hoed out and pulled up, and, in fact, seem to be quite persistent and annoying. Even the common morning-glory can become a weed. At one end of my Lima-bean trellis some four years ago I planted some morning-glories, and that end of the trellis was covered with morning-glories every year during the three years that the trellis was left in the same place. This year the ground in that vicinity is overrun with morning-glories, and although I admit that the flowers are pretty and showy I wish the plants were somewhere else besides in my vegetable-garden.

* * *

THE LIMA BEANS.—Last spring I changed the location of my Lima-bean trellis to a new place. Of course, it is some work to set posts and string the wire anew, but I think I shall do that every year hereafter, as it seems to give better results. The posts are not in the way of the plow, and the plants seem to thrive all the better in a new place. The season was very favorable.

I had Lima beans from the trellised plants in midsummer, and from then on so abundantly that a large share of the pods was allowed to ripen. Of course, that is always a mistake. It draws heavily on the plants' vitality, and soon checks the further blooming and setting of pods. The cleaner the young pods are picked off the longer will the plants continue in productive condition. All that I can do now is to gather the ripe pods, spread them out on an empty greenhouse bench or in some loft, and when thoroughly dry shell them, to be used for cooking or for seed.

* * *

THE RED RASPBERRY.—Among other small fruits for profit in this vicinity I think the red raspberry stands at the head. While blackcaps were abundant and cheap, the call was for red raspberries, and prices ranged from eight to twelve cents a quart right along. I am sure I can raise them at these figures with good profit. I have the Cuthbert, one of the best of the standard sorts, but shall plant a patch of Marlboro next spring. Unfortunately many of my Cuthbert plants were affected with orange-rust, and it may be necessary to destroy the whole plantation and set another patch in some other spot. From Mr. Griesa, of Kansas, I had a few plants of the Cardinal sent me, with request to plant them side by side with some other standard sort. The sender did not give me a description of his new fruit. I took it to be a red sort, and set the plants with Cuthbert and Colorado Everbearing. I should have set them with Shaffer or Columbian Mammoth. They resembled Shaffer's Colossal in cane and fruit, seemed of remarkably strong and healthy growth, and very productive. Undoubtedly the berries are fine for canning, but I doubt that they will become popular in our markets. That dull purplish color is against them. Quality is good.

* * *

FRUIT FOR EXHIBIT.—A fine fruit exhibit was made in Chicago in 1893. Apples, grapes, etc., of the crop of 1892 had to be carried over in cold storage, and they made a fine show. Before that time it was held that fruit after being taken out of cold storage would quickly decay. But those grapes and apples, for instance, in the New York state exhibit remained on the tables for weeks and months in good condition. If such a good showing could be made at that time it seems that with the present crop of fruits, especially apples and grapes, a grander exhibit than has ever been known before in the world's history could be an easy possibility for next year's Pan-American Exposition. Whether similar efforts will be made by the management or by the individual states is another question. If not, it will be an opportunity lost.

T. GREINER.

2

THE WEST INDIA HURRICANE

The hurricane that destroyed Galveston whizzed across this section like a first-class blizzard, tore the apples and pears off the trees and split millions of the leaves into fragments. If the wind had been steady bushels of the fruit would have held on, but it came in fierce gusts that whipped and whirled the trees about in such a way as to throw the fruit in every direction, some of it twenty feet or more from the tree. All of it was badly bruised and rendered unsalable. It was very severe on peach-trees. Mine look like a cyclone had struck them. To be sure, the loss of a nice little crop of fruit is rather depressing, but it is so little compared with the loss suffered by others that one must consider it too small to think about, much less worry over.

FRED GRUNDY.

2

REPLANTING FOREST-TREES

The future of walnut timber has been provided for in Kansas by extensive planting. This foresight has not been in evidence in the eastern section of our country. It is now said, however, that the Potts family, at Nantmeal, in eastern Pennsylvania, have set out thirty acres of black-walnut trees. This tree has an advantage in bringing in revenue by its nuts long before being of value for its timber.—Meehan's Monthly.

ORCHARD AND SMALL FRUITS

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THE YORK IMPERIAL APPLE

This is a very promising variety for this region, but a rather large proportion of the apples are "culls," and although rated as a good keeper, a considerable percentage is inclined to rot shortly after being gathered. Notwithstanding these defects, however, it is an apple of great value, and well suited to the mountain region. I believe that I was one of the first to bring the York Imperial and the Rome Beauty into this region. The latter is a beautiful dark-red apple. It is large and quite uniform in size, and the quality is good, in fact, much better than the Ben Davis. The tree is a slow grower, but an early and good bearer. It blooms very late, and is rarely injured by late frosts. This fact is one of its characteristics, and makes it especially valuable in our region.—G. E. Boggs, North Carolina, in Rural New-Yorker.

2

INQUIRIES ANSWERED

Sun-scald.—G. W. D., South Prairie, Wash. I think the injury you refer to is caused by a sort of sun-scald, which comes on in the latter part of winter. It can probably be prevented by protecting the trunks during winter with some material that will shade them, such as gunny-sacking or paper.

Time to Prune.—F. E. D., Narnassus, Pa. It will be perfectly safe for you to prune your trees in October and November if you coat the wounds well with white lead. The work may also be safely done in mild days during winter and very early in the spring before the buds start. The worst time to prune is just as the sap starts in the spring, as the sap seems to encourage decay around the wounds.

Clover in the Orchard.—A. F. G., Newport News, Va. Your plan of sowing clover in your orchard and then plowing it under in the fall is a very good one and desirable. All apple-trees should be looked over in fall and spring for borers, and this can be done just as well with the clover on the ground as under any other conditions. Clean culture is the best treatment for an orchard, but an occasional crop of clover should be plowed in.

Planting Raspberries and Blackberries.—J. A. T., Centerville, Rhode Island. A very good distance for raspberries is three or four feet apart in rows seven feet apart. I think blackberries should have at least eight feet between the rows. Autumn is a good time to plant blackberries and suckering raspberries, but not for blackcap raspberries. Especial pains should be taken to set them in firmly, and then it is a good plan to put a forkful of stable litter around each plant, to prevent their heaving out in winter.

Stratifying Peach-pits.—L. S., Precept, Neb. To stratify peach-pits, select a piece of dry land where no water will stand, clean off the grass, and lay down the peach-pits three inches thick in a bed four feet wide. Cover with two inches of earth, and pack down with the back of a spade. Put on three inches more of peach-pits, and so continue until the pile is two feet high; then the whole pile should be covered with earth six inches thick. On the approach of winter cover with a little litter. This work should be done before the pits get very dry, say some time in September or October. The same method will apply to apricots, cherries and plums, only the layers of these smaller seeds in the pit should be thinner and not much over one inch thick.

Drying Prunes.—A. J., Salt Lake City, Utah. The prunes are gathered as they ripen and graded into even sizes. They are then dipped into lye, to thin and crack the skin, which facilitates the escape of moisture in drying. In a large caldron lye is made with one pound of concentrated lye to twenty gallons of water, and is kept boiling hot. The fruit is put into galvanized-wire baskets and dipped into the water for a minute, or until the skin has a wrinkled appearance. It is then plunged into clean water, to wash off the lye. After this treatment the prunes are placed on trays and dried in the sunshine in climates having an abundance of clear sunshine, as in parts of California, or they are dried in ovens, as is the case in Oregon and Washington, where sunshine cannot be depended upon. When nearly dry the prunes are put through a "sweat," which takes several days, and they are then ready for grading, finishing and packing. The finishing consists in steaming the prunes and then dipping in hot water to which glycerin is added at the rate of one pound to twenty gallons of water. This imparts a glaze to the prunes, and prevents their drying too quickly. This process also kills any insects that may be on them. They should then be packed in air-tight boxes or canisters.

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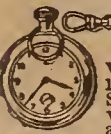
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INDUSTRIAL WORK IN THE SOUTH

[CONTINUED FROM PAGE 3]

plan one thing that the intelligent observer cannot take up and follow alone, and that, too, in the majority of cases, at small expense.

There is much food for thought in this necessarily brief description of this industrial work if the reader will but take it home to himself. It cannot be denied that all of us make too little use of the opportunities at our very hands; we are content to stay in the ruts, and yet are morose and unhappy when we see our more progressive neighbors forging ahead. We may not



SUPPORT FOR VINE

be in a position to buy many improved implements, but none are too poor to have the experiment plot as suggested, nor to utilize the materials at hand in making our homes more attractive and our farms more profitable.

A MODEL FAMILY

It was not in a city surrounded by all the luxuries of the end of the nineteenth century that I visited this family. It was in a rural district, just an average farm home, with little to distinguish it from the average farm except that the home and family were a type of what a farmer's family might be, but alas! too often is not. The farmer and his wife were, or had been, hard-working people. They had worked and saved until the farm had been brought to a paying basis, and were now content to rest from active labors, keeping only such an amount of stock as the farmer and the boys could care for with the aid of a hired man, who had a family of his own and boarded himself.

The children of the family—six in number, ranging from three to twenty years of age—had all the natural inclinations of boys and girls for fun and frolic, and in this the parents encouraged instead of discouraged them. No house can be quiet with half a dozen healthy, good-natured youngsters in the sitting-room, parlor and kitchen, and in this way this house was no exception. But one did not mind the laugh and joke. Even the bang of an occasional door seemed to have a good-natured ring; there was no malicious slam about it. One did not mind the subdued whistling or the humming of a tune. The boys were such bright, manly fellows that they could be forgiven such trifling transgressions. And the pleasant voices of the girls, as they went singing about their household duties, had a charm about it. Their naturalness and freedom of manner, their politeness and courtesy to one another had nothing of the "company airs." Thoughtfulness for others was an every-day practice with them.

Where there came a clash of interests or inclinations the younger children instinctively turned to the older ones or to the parents for settlement of their difficulties. There was no quarreling, and a good-natured compromise was always agreed upon. The work about the house, and the barns as well, was performed by the members of the fam-

ily. Each boy had his work, and performed it, in caring for the stock and stables. In the house the girls took turns at sweeping, dusting, chamber work and kitchen duties. The boys were always given full credit for the neatness of the barn-yards, and took great pride in the stock, which in showing the father was careful to point out Tom's cow, Frank's team and Ned's fine pigs. It was the same in the house. In different little ways Nellie's cake was complimented, Jennie's fancy-work noticed, and even little Ruth's first efforts at quilt-making spoken of in such a way as to cause her baby face to brighten.

In education, so far as schooling was concerned, the children were nothing above the average farm boys and girls of their age, or most certainly nothing above what any ordinary farm lass or laddie might be. Strange to say, not one of the boys had ambitions to leave the farm. I remarked to the father that he seemed to have solved the problem of how to keep the boys on the farm. He smilingly replied, "That question never troubles me." I then asked him for his method. He was thoughtful for a moment before replying.

"Well, in the first place I never try to keep my boys on the farm," he said. "If one of the boys ever shows a distaste for farm work I shall discourage any effort to make him choose it as his life's work. A father is wronging his boy if he compels him to keep at work his very nature rebels against. I believe that it is a man's own fault nine times out of ten when his boys leave the farm."

"He holds the boy in semi-bondage, does not trust him to do work or transact business, never talks of his future plans or explains the work being done on the farm. He gives the boy the slowest old horses on the farm to work with, always picks out the disagreeable jobs for him to do, keeps him at it from morning to night six days in the week, and on Sundays, too, as the hired man needs one day in the week to rest and visit. Will a boy follow a life like that? If he is a fool or lacks the ambition of an oyster perhaps he will; otherwise not."

"Though no one would accuse me of favoring or pampering my boys, I have always endeavored to make farm work attractive for them. It pays me to give them fat, sleek horses to drive. I find that a boy caring for an animal that is his individual property will learn far more about the needs of that animal than if he were tending an animal belonging to me."

"We study farming, the boys and I. We take two good papers on farming, and read and discuss what comes in their columns. I have books on farming, too, and we always consult them when in doubt how to proceed with our plans or work. And in business the boys have taken the care of their personal expenses off their mother and me. They, with their stock and other ways of earning money, buy their own clothes and other necessities, and are learning the management of funds and the ways of the business world. They have their deposit and check book, and keep a bank account."

"The mother has taken much the same course with the girls, though, because of the nature of their work, it is more convenient to give them an allowance. There are many little ways in which they may add to their allowance. By giving them a share in the profits of the butter and eggs they unknowingly teach themselves economy. And so the youngsters have their own money without asking for it. They feel better about it, and no doubt I do, too."

He said many other things, for I found he liked to talk of his family when he had an interested listener. I saw why this family was so different from many others. It was no mystery why the children were pleasant company for themselves and others. I realized that indeed this farmer had solved the problem of keeping the children contented on the farm. I saw why it was that with sad faces they alluded to the separation soon to come, when the oldest boy and girl must leave home, the one to attend the agricultural school and the other to take an art course in the state university.

JIM L. IRWIN.

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THE POULTRY-YARD

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LAYING AND MARKET FOWLS

IT MAY not be profitable to keep the "best-laying breed" unless it can endure the climate where the winter season is very cold, for no breed will lay that is unable to brave the cold. If eggs are the main object the poultryman or farmer must feed with that purpose in view. He may feed wheat and corn, to sustain heat of the body and to provide the yolks of the eggs, but he must also give something else, in order that the hens may have within their reach all the materials for making complete eggs, for which purpose meat, bran, linseed-meal, clover, cabbage and cooked potatoes or turnips should be given in addition to the grain. Every one who feeds for eggs should keep in view the fact that a laying hen is not intended for market, and that making such hens fat is no part of the management for egg production. To prevent the hens from becoming fat while consuming enough food for their support and for production they must be made to work for the larger share of the food received, by scratching in litter. If this fails to accomplish the desired result then the food is not balanced. Too much grain may be allowed, and the remedy is to reduce the proportion of grain and give more meat. The hens will also keep in better condition when judiciously fed. The allowance of cabbage and grain food is not because of the nutritious material contained in such foods, as they are really of but little value, but they perform excellent service from a dietary standpoint. No food should be given in a trough unless absolutely necessary, but it should be scattered, if of grain, so as to force each hen to work diligently in order to secure her share.

INBREEDING AND DISEASE

Years ago such diseases as roup, chicken-cholera and canker were almost unknown, and fowls seemed to die natural deaths, unmolested by any complaints whatever. About the holiday season the chickens were reduced some, and when families chanced to receive strangers or friends the roosts were disturbed, otherwise they crowded and cackled at pleasure. With our newly introduced varieties have come evils that with all our study we cannot wholly avoid, although we can greatly alleviate them. Too close breeding, which has been practised for generations back, in order to keep a breed or strain distinct, has been the cause and brought affliction on nearly all races of fowls. The effect is just the same on the birds of the air. They seldom mate with those of their own blood. Instinct, perhaps, teaches them in some measure to avoid this. Where they do so the progeny is affected more or less with failings and weakness that render them easy prey to all their enemies. We must avoid the shortcomings of close breeding, and keep our strains and breeds distinct. In order to do this we must exercise close care and choose the breeding-birds from those that have never been affected with disease.

WARMTH IN THE POULTRY-HOUSE

If your poultry-house is damp and cold hang up a stable-lantern at night, suspended with a wire, and do not have the flame too high. This we have frequently recommended. It will not only warm the house, but dries the air therein. Do not be afraid of carbonic-acid gas, or have any fear of the entrance of fresh air, for even one lantern may not be sufficient to warm the house on a cold night, as more so-called "fresh air" (that is, cold air) will get in than you can keep out, even if you try to prevent it. Another point: when you build a poultry-house have your windows large. Do not be afraid of plenty of glass. The sunlight on the walls and floor dries the house, makes the fowls cheerful and happy and renders the in-

terior of the house as bright as outside. True, glass radiates heat at night, but it also permits the wood to absorb the heat during the day. The heat of the night can be retained with a hanging-lamp, but the glass should let in the heat during the day.

NITROGENOUS FOODS

If fresh bones cannot be obtained, then desiccated fish, which is cooked and the oil pressed out of it, or ground meat and bone or steamed meat may be used. These articles seldom cost over two cents a pound. A pound of meat and bone or fish may be allowed to sixteen hens once a day, or one ounce to each hen. Grain is cheaper apparently, but lean meat contains three times as much flesh-forming matter as grain, and many times more lime, as well as a fair proportion of carbonaceous matter; hence, lean matter should always be used. Meat, being three times more valuable than wheat for producing eggs, is therefore much cheaper; and, in fact, as meat makes the hens lay, while wheat cannot always be relied upon, meat is really the cheapest of all foods. The food must conform to the demands of the hen for egg material. If hens were allowed a whole bushel of grain each a day they could not eat enough of it to provide the lime for the shells or the nitrogen for the white of the eggs.

FOOD FOR YOUNG CHICKS

Newly hatched chicks are much invigorated when they are allowed to remain undisturbed for the first twenty-four hours after they are free of their shells, and with rare exceptions they will then take as much food as they require. Even after this time it is a mistake to feed too often. Every three hours is quite as frequent as they require to be fed during the first week of their lives. When a week old every four hours is quite often enough to feed them. From the time they are a month old until they are three months old three meals will be ample for twenty-four hours. Never leave any food by the chicks after they have eaten what they will, unless it is dry food placed after dark where they can partake of it as soon as it is light. Between meals, however, they may be given a tablespoonful of millet-seed to a dozen chicks, to induce them to scratch and be busy.

EGGS FOR HATCHING

Eggs for hatching should be fresh, collected daily, smooth and nicely shaped, not too large or small, and from hens instead of pullets, unless the pullets are of last March hatch. They should be sold in lots of one hundred, and can be packed in ordinary shipping-crates (those with pasteboard partitions). To keep them not over a week should be the rule, packed on the small end in a cool place; but they must not freeze. They will ship any distance. Another way of packing is to put the eggs in little pasteboard frames and pack the frames in square or oblong baskets, using chaff or bran to fill the spaces. Wrap each egg in tissue-paper, cover the basket with white muslin, attach an addressed tag, and mark on the muslin, "Eggs for hatching. Handle carefully." The baskets can be procured at any basket-store.

SCALDED OATS

When oats are scalded at night and allowed to remain until morning they make an agreeable change of food from the regular diet. Twice a week is sufficient to feed such food. Oats make better food in summer than corn, as they are not so heating in their effects; but some object to oats on account of the small proportion of grain compared with the husks. The scalding of oats softens the hard, woody husks and renders them very nutritious.

THE SHOWS

Farmers as well as breeders should take an interest in the shows. Although they may not care to exhibit, yet there is much to be gained by viewing the fowls and becoming familiar with the breeds. At the same time every farmer is capable of breeding as fine specimens for the shows as those who make such business a specialty; and if it is necessary for them to educate themselves in that respect they should at least encourage the exhibitions as a method of assisting to promote the breeding of poultry as a source of profit.

THE HAMBURGS

The Hamburgs, combining as they do prolificacy with beauty, are not only ornamental, but profitable. They are nearly as hardy as the Leghorns, and have rose-combs. Unfortunately they do not possess yellow legs, which is a characteristic always desired by the majority. The Hamburgs mature very early and have been known to lay two hundred eggs each per annum, which is far above the average. There are several varieties.

MILK FOR POULTRY

In cases where milk is very plentiful, and only a portion is needed for fowls, it will be well to give the milk in the form of curd, by heating it until the whey separates from the more solid portions. This is very nutritious, and its constituents so nearly resemble the white of the egg that it is really an excellent article of food. Let no one hesitate to take from his waste milk whatever his hens will use, assured that they will yield five times over the returns that swine or other stock would give for the same amount.

CORRESPONDENCE

EARLY-LAYING PULLETS.—I noticed in the FARM AND FIRESIDE of June 15th issue that you say some Leghorns and Hamburg pullets have been reported as laying when but fifteen weeks old, and others at sixteen weeks. They frequently begin, however, at twenty weeks old. I have two Barred Plymouth Rock pullets that were hatched April 1st. One commenced to lay August 12th and the other about August 16th. One of them has stopped laying and is very anxious to sit. The Plymouth Rocks are the most difficult to break from sitting in the world. I have one that I kept inclosed in a box two days with but little food. I turned her out, and in thirty minutes she was on the nest again. With her I have two others standing in an inch of water in a barrel, and they, like the Dutchman's hen, sit standing up. E. R.

Brandon, Wis.

WHAT DUCKS CAN DO.—I have seen many accounts of poultry-raising in the FARM AND FIRESIDE. As I am only nine years old I have not had much experience, but I will tell you what I made off of two ducks. As I was coming home from school in May, 1899, a neighbor lady gave me two duck-eggs. I took them home and set them, and they hatched on June 6th. They both grew rapidly, and made two fine ducks. I bought a drake from a near-by store. This was my flock. My ducks began laying on January 20, 1900, and have laid over 200 eggs, and one is laying yet. The other one set and hatched a brood of ducks. I have sold over \$9 worth of young ducks, and have nine young ones yet, besides giving away two sittings of eggs. My ducks were always well fed and sheltered. They are the White Pekin ducks. G. G. H.

Oakdale, Ill.

INQUIRIES ANSWERED

Breaking a Sitter.—E. R., Brandon, Wis., writes: "Please give me the best method of breaking a hen from sitting."

REPLY:—Avoid any cruel method. Place the fowl in a coop made of slats—top, bottom and sides—raised from the ground. As she can create no warmth, the air under her being cool, she will abandon the attempt.

Feeding and Management.—E. H. H., Warwick, Mass., writes: "1. Are raw apples injurious to fowls? 2. Is a dust-bath of benefit in a clean, lice-free house? 3. Are cut vegetables equivalent to cut clover? 4. What can I use in addition to red pepper to obtain the equivalent of purchased egg-foods or stimulants?"

REPLY:—1. They are not injurious. 2. It should be used as a preventive. 3. No; the clover is more nitrogenous. 4. It is best not to use such things for healthy fowls. A mixture of one pound each of linseed-meal and ground bone, with a tablespoonful of salt and the same of sulphur, giving a gill to six fowls twice a week in the soft food, should answer the purpose.

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VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

Skin Disease.—S. E. F., Protection, Kan. and A. McF., Vincent, Ohio. Please consult answer given to B. W., Jonesburg, Mo., under the heading "Dry Sores," in FARM AND FIRESIDE of October 15th.

Milking-tubes.—A. F. J., Leon, Wis. No wonder that your cow contracted inflammation of the udder after you had three times used a milking-tube without thoroughly cleaning and sterilizing the latter before each insertion. Milking-tubes are very dangerous things, at any rate, if not kept perfectly clean and aseptic, which, I admit, is not so easily done as said. If the affected quarter of your cow is now dry leave it alone.

Wishes to Kill a Cow.—J. O. I., Milan, Tenn. If you wish to kill your cow, which, you say, is perfectly worthless, in the most painless and expeditious manner, I would advise you to shoot her either with a large-caliber rifle or revolver, or with a shotgun loaded with buckshot, right into the brain, by aiming at the center of the forehead two inches or a little over above the arches over the eyes, and death will be instantaneous. To kill any animal with poison, no matter what kind of poison may be chosen, is beyond question much slower and far more painful and distressing.

Warts on Teats of Cow.—W. H. G., Zucker, Cal. It is not advisable to make an attempt to remove warts from the teats of a cow while the latter is producing milk, and it should not be undertaken until the cow is dry. Warts on cows' teats, if provided with a ueck, as is usually the case, are then best removed by means of a ligature applied around the neck as tightly and as closely to the skin as possible, while those that may happen to be sessile, or without a neck, will have to be removed either by means of caustics or by means of the surgical knife; but the removal of these latter, which as a rule will disappear in time without any treatment, is best left to a veterinarian.

Crooked Legs.—L. A. J., Leesburg, Ohio. If your colt was born with the fore legs crooked, the prognosis depends upon whether the crookedness or abnormal bend is confined to the joints or whether the same is in the bones, because in the former case the prognosis is very fair, while in the latter it is hopeless. If, as you intimate, the abnormal curvature is due to contracted, or too short, flexor tendons the crookedness may be removed by a surgical operation, which, however, must be performed only by a competent veterinarian, and first only on one leg at a time, and on the second one not before the first has perfectly healed and is in a normal condition.

Clandestinely with Foal.—M. L. S., Elma, Iowa. If your mare was clandestinely served by an undesirable horse, and is now with foal, I most decidedly advise you to let her carry it the full length of time, for that will far less injure her than an abortion, no matter whether the latter is artificially produced or not. Then when the colt is born, at the proper time you can do as you please; you can either leave it with the mare, to be nursed until weaning-time, and then if you do not like the colt sell it, or dispose of it as soon as it is born; but if you do the latter you must not allow the colt to suck. Keep the mare at a light diet and put her to work as soon after delivery as her health will permit.

Decrease in Yield of Milk.—J. H., Hardin, Mo. Although it is possible that the sudden decrease in the milk production of your cow is caused by sickness, I regard it as more probable that it is not. Your cow, according to your own statement, nursed her calf precisely four full months, from the twenty-second of May to the twenty-second of September, and during this time, fully covering the best period of lactation, all the milking that was done (at least so I have to conclude from your statements) was exclusively done by the calf, and nature promptly responded to this natural means. Then the calf was (probably) suddenly weaned. The weaning itself caused a decrease in the yield of milk, and milking by hand was substituted for the sucking of the calf; nature, accustomed to the latter method, did not respond, at least not sufficiently, to the artificial substitute. Such an occurrence is not at all uncommon and can be quite often observed. It might have been different if the cow had been milked also while she was nursing the calf, if the latter had been allowed only to get a part of the milk, and if this part had gradually been decreased to nothing further, if the calf had been kept separate from the cow and only been allowed to be with her and to suck at stated times, and not been admitted to her presence until some milk had been milked out.

Probably So-called Paperskin (known as Lombrix in Texas and Mexico).—P. J. E., Olathe, Kan. Please consult answer to E. L. H., Bipplicott, Pa., in FARM AND FIRESIDE of October 1st. If you failed to find any worms you may not have looked for them in the right place, the pyloric portion of the fourth (rennet) stomach, may not have recognized worms in the wriggling mass of apparently fine and short brownish-colored threads; or it may be that the worms had already passed off, but before passing off had damaged the animals to such an extent as to make life impossible.

Probably a Case of Periostitis.—A. H., Library, Pa. What you describe appears to be a case of periostitis, probably produced by a mechanical injury, perhaps a kick from another horse, or something that would have a similar effect. The case should have received proper attention long before this. If it had been treated in time nothing very serious might have resulted, and even now I would advise you to have your colt treated by a good veterinarian, especially as even an abscess formation is not improbable. If there are no signs of an abscess-forming, and if the swelling, which, you say, is hard like bone, has not undergone any changes since you wrote, you may rub in once a day a little tincture of iodine on the same, but must continue the applications for some time before any results are visible.

Shrunken Muscles.—E. H., Abraham, Millard county. I cannot answer your question, because the information you give is entirely insufficient. You do not even say whether your horse is lame or not, nor where the shrunken (atrophied) muscles are. All muscles will shrink if kept partially or completely inactive for some time or if suffering for one cause or another from want of nutrition. So far as the motory muscles are concerned chronic lameness and paralysis constitute the most frequent causes of shrinking. If it is the former the seat of the lameness must be ascertained, and if then the lameness can be, and is, removed the shrinking will gradually disappear after the muscles have resumed their former activity. If paralysis, for instance, of the median nerve in the fore leg, or the crural nerve in the hind leg, constitutes the cause, time combined with voluntary exercise and a sufficiency of nutritious food will as a rule effect a cure, unless a recovery is made impossible by injudicious treatment or downright quackery.

Retention of the Afterbirth.—J. C. W., Glenwood, Oreg. A retention of the afterbirth occurs most frequently if the birth of the calf is a little premature—or, in other words, if the calf is born a few days too early—and then the afterbirth as a rule will be expelled in a few days, usually after about three days, and in these cases it is not necessary to interfere; but as the afterbirth, if retained but a few days, will soon undergo decomposition I deem it advisable to irrigate the uterus with a one-per-cent solution of creolin in warm water immediately after the afterbirth has been expelled. Only in such cases in which the cow has suffered before from retention of the afterbirth will it be advisable to proceed to remove it by hand the next day after the birth of the calf; but this is an operation that should be entrusted to nobody but a competent veterinarian, and where one is not available, I advise not to undertake it, because rude and unskillful manipulations may be productive of great and irreparable damage. If the afterbirth is not expelled inside of three days an irrigation of the uterus twice a day with a one-per-cent solution of creolin in milk-warm water will as a rule soon effect an expulsion, and if not, it will, at any rate, prevent and counteract bad consequences caused by the decomposition of the fetal membranes.

Swelled Legs—Condition Powders.—W. F., Barrs Mills, Ohio. Swelling, or stocking, of horses' legs is often caused by insufficient grooming and an unsuitable diet, particularly too much soft food. The remedy in a case like yours consists in giving exercise during the day, in thoroughly cleaning the swelling legs every night with a good brush and giving them a good rubbing with the hand, and if the swelling during the night is excessive in applying every evening a bandage of woolen flannel from the hoof upward to the hock, to be left on during the night and to be removed in the morning; then in the morning the legs should receive another good rubbing with the hand before the exercise during the day. If there are sores below the fetlock, these sores must be brought to healing by making twice a day to them a liberal application of a mixture composed of liquid subacetate of lead, one part, and olive-oil, three parts. This treatment is to be continued until the legs cease to swell during the night. But if the horse receives too much soft or sloppy food, or is not kept out of mud, manure and water, the treatment cannot be expected to do much good.—As to condition powders the only one that is worth anything and that I can prescribe is composed of good care, a sufficiency of good, wholesome and nutritious food that requires mastication and insalivation, pure water for drinking, pure air for breathing, proper grooming, a clean and dry stall, and clean and dry bedding if the horse is kept in the stable, protection against the inclemencies of the season, and sufficient, but not excessive, exercise, or work and rest.

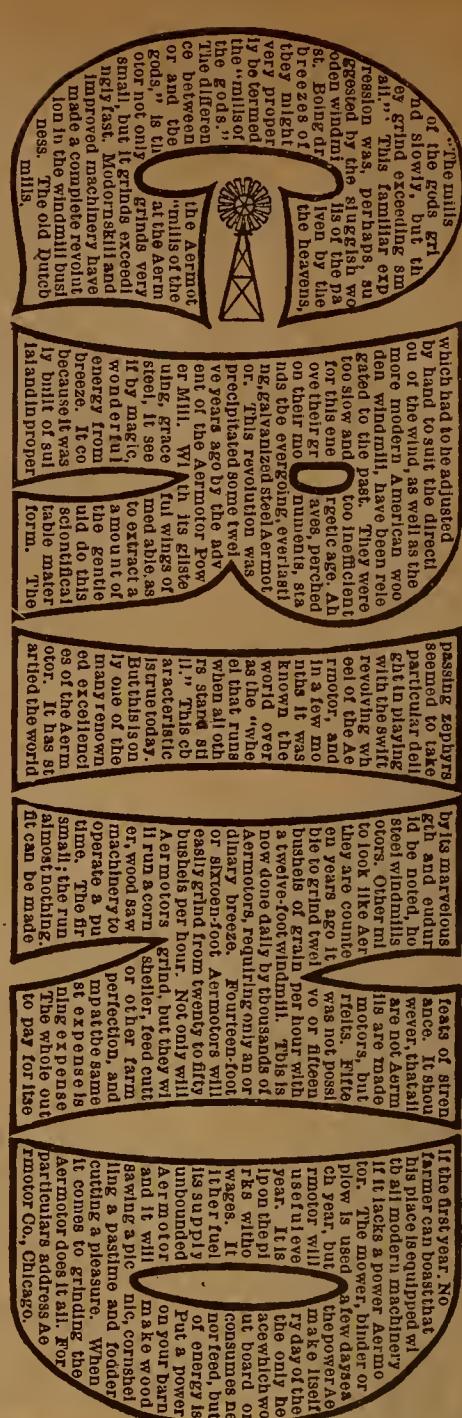
Swine-plague.—W. F., Meyersville, Tex. What you describe is a case of swine-plague, or so-called hog-cholera. If you have any pigs that are not yet infected, separate them from the others, and keep them strictly and in every respect separate, and you may possibly save them.

Barren Cow.—F. E. C., Viola, Iowa. Barrenness of cattle and of other domestic animals may be the product of a variety of different causes. Wherever the cause can be ascertained, and is found to be of such a nature that it can be removed, the remedy is provided. But as it is, it is seldom easy, and often impossible, to find the cause, and then if found it may be impossible or exceedingly difficult to remove it; therefore, it may be safely said that in a majority of cases the prognosis is unfavorable. It is claimed that in some, quite numerous, cases the cause consists in a sour reaction of the secretions of the female sexual organs. If such is found to be the case perhaps by means of litmus-paper an injection of a weak solution of carbonate of soda, just strong enough to change the sour reaction into a slightly alkaline one, made into the vagina of the cow just before she is served, may be tried and be found to be effective.

Keratitis—Caked Udder.—M. M., Clay Center, Kan. Your calf, it seems, suffers from keratitis, or epizootic ophthalmia, of cattle. If you consult answer given to H. H. S., Oakford, Ohio, in FARM AND FIRESIDE of October 15th, you will find the desired information. Said answer, however, contains two errors, one of them of considerable importance. In line four from above the disease is called ceratitis instead of keratitis; the latter, derived from the Greek, means an inflammation of horny tissue, and as applied here an inflammation of the horny membrane of the eye, while the former, if such a word existed, would mean an inflammation of wax. The more important error is in lines sixteen and seventeen from above, where four per cent and seven per cent respectively should read: ".04 (4-10) per cent and 0.7 (7-10) per cent." To avoid possible mistakes I wrote in parenthesis "four per mille" and "seven per mille." A four-per-cent solution of corrosive sublimate and a seven-per-cent solution of nitrate of silver might become very injurious to any eye.—Concerning the caking of the udder of your cow (garget), the fact must not be lost sight of that a cow like yours giving an extraordinary quantity of milk requires milking oftener than twice a day if garget, or caking of the udder, as you call it, is to be prevented. If you have difficulty in getting her dry when calving-time approaches you will have to feed her less milk-producing food, keep her on a lighter diet and give her no more water to drink than she actually needs.

"Spanish Itch."—L. H. S., Westlake, La. I really do not know what you term "Spanish itch;" it is a term I am not familiar with. If it means mange, a disease corresponding to, though not exactly identical with, itch of human beings and scab of sheep, I advise you to wash your horse first thoroughly with soap and warm water, and to apply the wash with a good horse-brush, so as to remove every scab and to open every tunnel beneath the epidermis affording the mange-mites a hiding-place. This done, apply before the animal is dry another wash with a five-per-cent solution of creolin (Pearson's) in water, and at the same time have the stall of the horse and also all stable utensils, in short, everything that may come in contact with the horse, including harness, halter, bridle, blankets, etc., thoroughly cleaned and disinfected; for if this is neglected all your trouble will be in vain and the horse will soon become reinfected. Things that can stand exposure to boiling heat are best disinfected by boiling them in water. Leather should be cleaned with soap and warm water and then be oiled with fish-oil; stable bedding and manure should be burned, and also everything else that cannot be reliably cleaned and disinfected. In about five days the wash with the creolin solution must be repeated, and as your climate will allow it, it may be best to keep the horse outdoors until after the second wash, for this may save the trouble of disinfecting the stable or stall, as the case may be, the second time, because if left uncoupled until after the second wash, and is at the same time kept dry and exposed as much as possible to sunlight and fresh air, all the mites and their ults that may have been deposited will have perished. Woodwork, etc., is best cleaned, and disinfected first by washing it with soap and hot water and then whitewashing it with lime or with chloride of lime. If the washings of the horse have been thorough the two washings with the creolin solution will suffice; but if not, a third wash five days after the second will be necessary.

Stomach-worms in Sheep.—When a farm is infested with this plague, the first thing the man should do is to divide his farm in parts, and keep the sheep separated until the eggs and all the young parasites have absolutely died out in that pasture. These worms and their eggs are passed directly from the sheep, fall upon the pasture and keep alive by the moisture there three or four days or more; in damp and shady places for a month or six weeks. The sheep comes along, picks this worm up and is infested with it.—Shepherd's Bulletin.



THE GRANGE

Conducted by MRS. MARY E. LEE, New
Plymouth, Ohio

THERE are several questions upon which we would like more light, and we would be very grateful to our friends if they would help us. We believe that by so doing we could render one another valuable service. To facilitate matters we will put our matter in the form of questions. The first relates to the labor problem.

Do you have a scarcity or an abundance of labor in your neighborhood? Are the laborers foreigners (if so, what nationality), native or colored?

What class gives the best service?

How do the wages compare with those paid fifty, twenty-five and ten years ago?

Taking in consideration the method of farming and the markets, which wage paid the employer best, that of fifty, twenty-five and ten years ago, or the present wage?

What wages are paid in your neighborhood?

For how many months in the year are laborers employed?

If laborers are scarce, what, in your opinion, is the cause of it?

The newspapers have a good deal to say about the drift of the city population to the country. Is this, in your locality, a fact?

We would be glad to have the same information about indoor-labor help.

We want to hear from you whether you are a member of the grange or not. The FARM AND FIRESIDE goes into every state in the Union, and if our readers will kindly respond we may be able to get at the root of the labor problem on the farm. Kindly write us at once.

The other matter relates to juvenile granges. There is not enough known about them. Will not some one belonging to a juvenile grange write us and tell us all about it and the work that is done? A sample program would be gratefully received. We would rather have the report from a child. There is a charm and artlessness about a child's letter that goes straight to the heart. We want to publish these reports and see if we cannot bring these juveniles in closer touch with one another. You know, this world is very small, and we want to clasp hands now and then.

Patrons all over the United States are proud to know that Honorable S. H. Ellis, universally respected and beloved, is candidate for president. In these degenerate days it is good to know that honors come unsought. It is no honor, you say, to get a nomination for which one has to spend time and money? I agree with you; but this nomination came unsought. Mr. Ellis is not an office-seeker. He prefers the quiet life which his services to his country justify him in asking. But the people know him and trust him and asked him to lead them.

Like the ark of the covenant that was borne before the Israelites, to give them power over their enemies, so the traveling library has come into our midst to vanquish the modern enemies of mankind—ignorance, indifference, superstition and the various foes of the best and truest life. Five others journeyed to us, sojourned with us awhile, and passed on, to scatter seeds of sunshine and beneficence to other places and people. So attached have our people become to the traveling library that they would as soon think of neglecting the observance of Christmas as to forego the privileges the state is conferring upon us. We have long been anxious to have a library of our very own. This year we are making the experiment of charging each family twenty-five cents for the use of the books, and after paying all expenses devoting the proceeds to the buying of books. Thus, while we will be getting the use of the state library for a mere pittance, there will still be a surplus with which to buy books for our permanent library. Some of our people are great readers, and I feel sure their contributions will swell

the sum to a goodly amount. It is our plan to have a constant influx of books from the state library while adding to our own. We will not be strong enough to stand alone for a year or two. But if the state is always ready and willing to supply us with food to satisfy our mental hunger we are ready to receive. This is the true end of the traveling-library movement—to create a library spirit where there are no libraries, to strengthen it where libraries are already established, and to supply books that a small local library could not possibly afford to buy. The collection sent by our state librarian is certainly a most excellent one, and does credit to his judgment. There are books to meet every taste—books of history, travel, fiction, poetry, biography, agriculture and domestic science. Neither are the little ones forgotten. Here are volumes that make the child's eyes sparkle and his heart leap with joy. Then there are works from the higher realm of literature, philosophy and science. Taken all in all I doubt if a better, more adaptable lot could be found. We have had at least two hundred dollars' worth of books in this community at a cost of about five dollars to us, for transportation charges. The sum is not quite that much, but I have not figures at hand to give exact amount. In what way could we have spent a like sum of money from which we derive so much pleasure and profit? Aladdin's lamp, even if rubbed vigorously and long, could not supply one half the comfort our traveling library has given. And then we have the comforting assurance that no one, however fortunate his surroundings, has better opportunities for acquiring knowledge than we in our own little country community. If there are others who would like to try our plan, or have any other to suggest, we would be glad to have them present their ideas on this page. We want to see every community supplied with helpful, instructive and entertaining literature. We know of no plan that promises so much good with so little outlay of money and time.

A word as to the size of library clubs. You may be so unfortunate as to live in a community where there are only one or two reading families. You fear that you cannot secure books. Why should you deny yourselves the pleasure they would bring you just because you are only a small crowd? Send to the librarian, tell him your needs, and I assure you he will be only too glad to supply you with the necessary blanks to fill out and return. You will then receive your books with no outlay save for postage and transportation charges.

Ohio is a great state. She has sent out generals and financiers, authors, statesmen, philanthropists, travelers, men eminent in science, philosophy, art and letters. Her presidents and congressmen have had a prominent part in shaping the destiny of our country. Their genius and foresight have tided her over many rough places. Some one has called Ohio the "eighth wonder of the world." Shall I tell you why she is so great? She was peopled by a race of sturdy pioneers. They brought grit and grace to endure hardship, and scarce a community was there but had a few books in it. Books in those days were not so cheap as now, and if a pioneer parted with his hard-earned money it must be for something of real value. Thus the books he bought, like his boots and clothes, were gotten for their wearing quality. And there in the solitude and the silence of the forest, with the great wide fireplace for a beacon-light, the boys and girls read from the treasured volume. Not only read, but thought and hoped and dared and achieved deeds that gave promise of their future usefulness and power. And the boys and girls of to-day, if they would keep bright and untarnished the family escutcheon, must read good books, think great thoughts, hope great things and achieve great deeds. Our state is a kindly parent. She has gathered from the four quarters of the globe the rarest and richest of treasures. And she says to her children, "Whosoever will may have of the stores I have garnered." Was it not a wise thought, that in order to preserve the brightness of her fame, her guardians declared that these treasures should go out to the country roundabout, to bless and cheer and encourage?

And now that we are speaking of libraries, let us hunt up that splendid collection of books that was sent out all over our state into every township many years ago. Won't you make yourself a committee of one to find what books you can in your district? If the board of education would only take the matter in hand these books might be found and form a nucleus for another library. Our state librarian would be glad to have any facts concerning them that you can give.

"No matter what his rank or position may be, the lover of books is the richest and the happiest of the children of men."—Langford.

"If you visit your friend, why need you apologize for not having visited him, and waste his time and deface your own act? Visit him now! Let him feel that the highest love has come to see him, in thee, its lowest organ. Or why need you torment yourself and friend by secret self-reproaches that you have not assisted him or complimented him with gifts and salutations heretofore? Be a gift and a benediction! Shine with real light and not with the borrowed reflection of gifts. Common men are apologies for men; they bow the head, excuse themselves with prolix reasons, and accumulate appearances, because the substance is not."—Emerson, in Spiritual Laws.

THE ORDER OF PATRONS OF HUSBANDRY

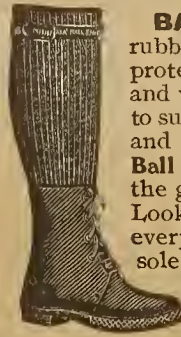
Its first purpose is education, which elevates nation, state, town and the home. The subjects considered by the grange bear intimate relation of the building up, improving and perfecting the nation, state, town and home. Knowledge has given America the prominence she occupies among the nations of the earth. Of all humanity those who till the soil and raise the products of the earth and utilize its domestic animals need most the advantages of the highest knowledge. When the minds of men have been so broadened by experience and education that they will see the best good and the largest benefit to the greatest number selfishness and jealousy will not control or impede the progress of our noble order socially, fraternally or financially.

Individual responsibility will not check the development of true manhood; but where few are compelled to usurp the custody of the many it is imposing the responsibility which should rest on the shoulders of others. Individual responsibility realized and accepted by all is the sure road to success in any enterprise; not only as members of our order, but as American citizens in the enjoyment of civil, social, intellectual and religious rights and privileges, we should stand independent of the trammels of association. So far as our individual judgment and personal responsibility in work and business of life will secure a higher civil, social and religious liberty, we can, in the enjoyment of that liberty, help to construct a government that will never interfere with true-manhood development. This individual responsibility as a citizen should strengthen the mind and enlarge its conception. The elevation of man by increased responsibility and larger independence has created our American type of character, and should qualify thinking men and women. However little known in his or her neighborhood or town, they will be able to discuss with wisdom the laws of trade, questions of finance and governmental problems, and have greater freedom from political and partizan trammels, and the influences of agencies that would ruin legitimate branches of trade.

The general object of the grange as set forth in the declaration of purposes is first, united by the strong and faithful tie of agriculture, we mutually resolve to labor for the good of our order, our country and mankind, to develop a better and higher manhood and womanhood, to foster mutual understanding and co-operation. We desire only self-protection and the protection of every true interest of our land by legitimate transactions, legitimate trade and legitimate profits. Fraternally submitted,

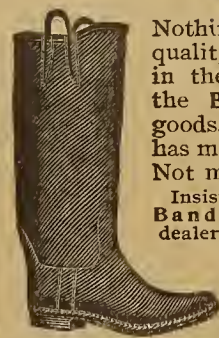
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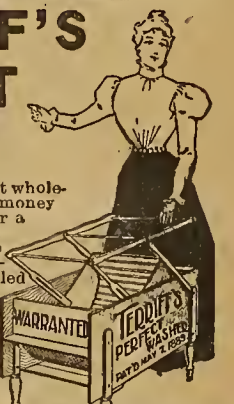
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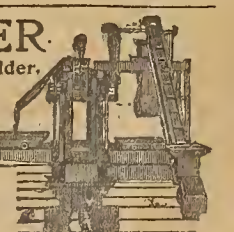
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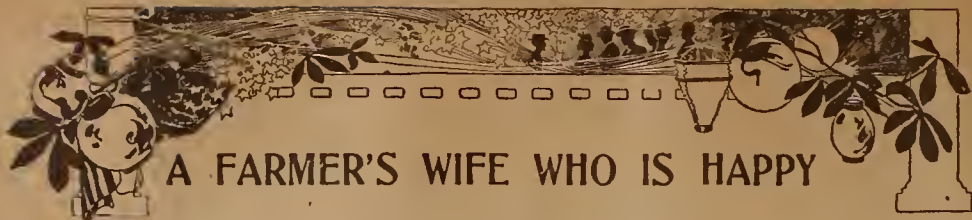
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A FARMER'S WIFE WHO IS HAPPY

By Helen D. Proctor

OFTEN we hear of the overworked, underfed, worried, tired, sick or insane woman, and as a cause for all these ills it is merely stated that she is a "farmer's wife," as though the natural condition of this immense body of women must of necessity be a desolate one. Far be it from me to assert that the life of a farmer's wife or any other poor man's wife is not a difficult one. The better half of our portly banker would no doubt declare she would die were she compelled to work as hard as does her sister of the farm. Yet between ourselves I fancy her "work" is just as trying to heart, brain and tissue, and her disappointments just as many, as those of her humble sister. There are very few perfectly happy people in this world of ours.

Just in sight of my window is the home of one of the few "perfectly happy" persons it has ever been my good fortune to meet. There is something so fresh and invigorating about this woman that a description of her life cannot fail to help some weary soul to "take heart again;" at least she herself would bring a breath of hope and vitality to the most hopeless one among us, but whether I can describe her with justice is another question; however, it is well worth a trial.

In the beginning God gave this woman health, and she has sense enough to take care of it (which, by the way, a great many people will not do). Fourteen years ago, when she was twenty-two, Farmer John brought his bride to the only home he had, the one he inherited mortgage-laden from his father.

Was she used to farm-life? Her father was a well-to-do merchant, and his only daughter had angered him beyond measure by marrying a "clod-hopper." Several years ago that same father, a now ruined speculator, died with his head on the "clod-hopper's" strong arm, and his last words were, "Thank God, Minnie is safe with you!" But I wander from the subject.

The farm-house has the cozy look of "home" written all over it. There never was much money to spend on fixing, but whitewash is cheap, and orderly yards and well-kept lawns cost only a little work from willing hands. There are no broken hinges nor missing fences on this farm. John has brains, and he uses them; thrift and grit are written all over his possessions. But no amount of brains can make a bad year good, and one dollar spent ever so wisely will never buy two dollars' worth.

However, little by little that mortgage creeps down, and little by little the "rainy-day" pennies increase. John will probably never be a rich man, neither need he dread old age. There will be enough to keep him in the farm-house when his working-days are over, and he has what gold cannot buy—happiness.

And such a farm-house! A pleasant, cheerful home where everything is neat and clean and touched with that invisible something which the bitterest poverty can never efface—the thing which some call refinement, and some, also, call pride or "high-falutin'" ways.

Come with me and spend an afternoon with this farmer's wife. We will find her sewing—she always sews after lunch, as the clothing of seven children—yes, seven—is an ever-growing problem. Minnie will greet us heartily—she, her children and her home are always neat, and she never dreads unexpected guests. As the afternoon passes you will find that this busy mother is as well read and thoroughly posted on current events as any one you have ever met. As she says, "I cannot afford to neglect reading; finishing-schools and travels we can never give our little ones, but information is cheap; it costs only a little extra effort to leave the evening hours free for reading and singing with our flock. We all look forward to our evenings."

"But please tell me how you manage to get through so much? Seven children and a house, and all on one woman! How do you do it?"

"Oh, it's easily done," says Minnie; and to watch her day by day it does seem so easy that one wonders why so many women break down at the same task.

"When we were first married," continues she, "I made up my mind that we were poor, and would probably always remain so. In deference to that fact I have never tried to live beyond our means; therefore, we have never owed a penny, except a mortgage we did not contract. The housework is easily attended to if one only remembers that to keep clean is so much easier than to make clean. Have a regular plan of work for each day of the week, and when you have experimented until you find a plan which covers the work with most ease and speed, stick to it. It is wonderful to see the time that may be saved by knowing what to do next.

"When a family grows as rapidly as mine does there will soon be hands to help. Train those hands. I have taught my children—boys and girls alike—to keep their own belongings in order, to know where everything in the house belongs, and to put it there. And last, but not least, to clean their shoes before coming into the house.

"The housework I divide into two classes—up-stairs work, which means putting the beds to air and dusting the sleeping-rooms; down-stairs work, which means setting and clearing the table, brushing up the crumbs and dusting the parlor and dining-room. You can see that none of this work is too heavy for growing children, neither does it take more than one hour of the twenty-four, yet it saves me many steps and teaches the children to be both useful and neat.

"There are only four who are old enough to work in my system. These I divide into pairs. One pair has charge of the up-stairs and the other pair of the down-stairs for a week; then they exchange. For this they receive the sum of five cents a week apiece. Not a fortune, is it? But it pleases them as much as though it were. Each one owns a tiny account-book, and settlements are made once a month. When extra work is on hand extra wages are offered, and one or all can earn a trifle more. The smallness of the sum makes them very careful as to the spending of it. Several times the joint wealth of the 'workers' has been invested in a sitting of eggs or a package of seeds, and the accruing profits divided. No opulent millionaire ever gazed on his possessions with more satisfied pride than do my flock upon their investments. Their chickens are quite numerous now, and the egg business is flourishing. They clear about three dollars a month above expenses, and have planned a European trip, to be taken in about twenty-five years if the hens keep on laying.

"As for my own part, I find that by having regular hours for meals and a plan of work for each day (which always includes a couple of hours' sewing in the afternoon while my three small ones are asleep) I can, barring accidents, which will happen once in awhile, you know, keep ahead and leave the evening hours free to be spent together reading, singing, talking and laughing. These are the happiest hours of our lives.

"And now you people who have enticed me to overwhelm you with this egotistical tattle must come sit on the kitchen porch while I see about tea, then we will spend a pleasant evening together."

It must not be imagined that Minnie explained her system to us uninterrupted and unasked, as I have given it. She is the last woman in the world to force her ideas upon any one. I have had to omit all our pleasant conversa-

tion. We stayed to tea. A boy and a girl set the table as daintily as could any liveried butler. The linen was coarse but white; the china was cheap and the glassware pressed, but each piece shone. The fare was plain, but it was wholesome and daintily served and prepared by some one who understood the ethics of food. Around that table sat a family of nine and two guests. A merrier party I have never seen. How easily they glide from one subject to another. The mother and father are as light-hearted as any child among them!

Yet here is a woman who, by all the accepted rules of the present generation, ought to be a tired-out wreck. But she isn't, and never will be, for her heart and brain are in her work, and she enjoys doing it. I once heard her say, "I cannot be one of the great folks of the world; the Almighty didn't need me for that. My work is to be a good wife and mother, and, please God, I'll do my best!"

May her shadow never grow less! If we could each of us just use our brains, and stop fretting for what we cannot have, but do our best, there would be fewer broken-down and insane farmers' wives. Long life to Minnie—a happy, contented, hard-working woman, who will transmit health and happiness to generations yet unborn. May they rise up and call her blessed!

AN INTERESTING FAMILY OF DOLLS

The furious and desperate-looking desperado (No. 1 in the illustration) is really of most amicable intentions, being a doll knit in sections of colored yarns, stuffed tightly with wool and sewed firmly together. His face and hands are of pink, his frock-coat of dark blue and his trousers of gay scarlet.



A piece of flowered muslin fastened in as a shirt-front, and black yarn raveled out for mustache and hair, complete the young man's toilet. For babies to play with, this doll is full of delight.

The dressy young lady (No. 2) is as unfeeling as a flirt—being at heart a corn-cob. A fine wire fastened tightly about the cob and twisted on either side serves for arms. These arms are wound with cotton, as well as the top of the cob, which serves for the lady's head, the face being covered with a rosy corn-husk marked with eyes, nose and mouth. The doll is dressed elaborately with corn-husks selected in delicate tints of old rose, cream and fawn. The sleeves are stuffed with cotton, an oat-straw with a shred of delicate husk serves as a parasol, and red crimped corn-silk fluffed out is the damsel's hair. A bonnet profusely trimmed with fringed chrysanthemums and ribbons are all fashioned out of the prettiest shades of these corn-husks, as well as a broad sash with loops and ends. In her stiff, rustling skirts this proud doll can stand alone, and is valued as a curious piece of bric-a-brac.

The smiling Japanese (No. 3) is sewed into a cushion of turquoise satin ribbon, leaving only head and arms free. Sleeves are sewed in for the arms, and a deep fringe of raveled ribbon is gathered around his neck for a frill. This doll, fastened with narrow turquoise ribbons to the dresser, not only keeps his mistress in good humor by smiling and nodding at her, but is most useful for hat-pins.

The baby doll (No. 4), beaming with waxen sweetness and placidity, has suffered the experiences, bumps and vicissitudes of life for so many years as the playmate of children and children's children that it is the best-beloved of all the family.

The blue-eyed, golden-haired miss in hood and mantle (No. 5) is not only beautiful, but useful as a twine doll. A ball of pink twine is put into a little bag of pink cambric and the bottom shirred together, leaving a small opening for one end of the twine. Over this twine bag is fastened securely the head and shoulders of a wax doll, which is afterward dressed in cunning little hood and suit made of two or three circles of pink crape-paper and tied with narrow pink ribbons. This pretty doll is now fastened to the dresser or some other convenient place where she may be useful as well as ornamental.

Nos. 6 and 7 are bisque dolls, in dainty colors, used as receptacles for matches and burnt ends. If preferred, their baskets may be filled with net cushions filled with white curled hair, and fastened in with a few drops of glue, making useful cushions for hair-pins.

A unique and pretty cushion for invisible hair-pins is made by sewing a ruche of bright-colored silk or ribbons around the cushion and fastening it in the circle of an old silver napkin-ring.

F. B. C.

WHEN CHILDREN "SQUABBLE"

"My children are just beginning to reach the 'quarrelsome age.' Can't some one suggest a remedy before the habit reaches the incurable stage?"

It was a decidedly anxious mother who made this request at the mothers' meeting, and out of the avalanche of advice which followed the mother who suggested separation seemed to offer the most reliable cure. She said:

"My little ones used to distress me greatly in this way, and I found by experience that the best remedy was sep-

aration. I would carefully take note (while seemingly busy at work), to see which child was the aggressor, and to that one I would say, 'If the others do not play to suit you don't play with them. Bring your toys over here, and then you can have things your own way.' In a short time longing looks would follow the other children's movements, and soon the request would come, 'Can't I go back and play with the rest?' I guess we can get along all right."

"If the squabble had been a trifling one I would accede to the request, with a caution, but in more serious cases I would keep the child apart for an hour or so, till he (or she) realized the value of companionship.

"I remember one day two of the boys came to words over a checker game, and I told them to stay in different rooms for a time. They kept to the letter, but not to the spirit, of the law, for before long I saw the little fellows with the checker-board placed between them in the doorway, each in his own room, deep in another game; and this time I noticed there was no quarreling.

"Children are contrary little beings. I remember again, when my sister and I were young, we were one day having a wordy war, when my aunt, who did not approve of such 'goings on,' popped us both into the wood-shed, telling us to stay at opposite ends of it till we could agree. We stood in sulky silence for some minutes, then with one accord exclaimed, 'She's as cross as she can be! Let's go and explore!' And when our anxious aunt came to liberate us we were sitting together on a log playing 'odds or even' with a handful of beans we had gathered up in one corner, and conversing as lovingly as if we had never heard the word quarrel."

P. W. HUMPHREYS.

THREE KISSES

When first I kissed you 'twas full on your mouth,
Red as a blackbird's cherry. You recall?
'Twas spring, the soft air smelling of the South,
The whole world gay, and you gay most of all.
You laughed—that low, sweet, tender, bird-like trill
Which made the very bobolink be still.

When last I kissed you, dearest heart of cheek,
Molded just round enough. 'Twas autumn then,
And you were graver grown, and did not speak,
But seemed in wonder at the ways of men.
And yet you smiled. So dear a smile it was
That it seemed sudden summer over us.

When last I kissed you, dearest heart of gold,
My lips just brushed your forehead. You were sad,
And it was winter. All the world was old.
But at the touch my love swelled fierce and glad,
For then I felt you tremble, and saw fall
Two great, slow tears. Ah, that was best of all!
—Post Wheeler, in New York Press.

THE VALUE OF MONEY

SOME one has said, "Money does not make the man, but things are apt to be much more comfortable for the man makes money." We read of misers who love money just for the pleasure it gives them to hoard it, to handle it and to count it over, but such cases are rare.

Money is chiefly valued for what it can bring, and it seems foolish for a person to claim to care nothing for it. True, money alone cannot buy health, education, friends and happiness, but if rightly valued and used it can help to give us all of these. Of course, the environment, character and habits of a person shape his views on all subjects. If one has seriously felt the need of money, and is obliged to work hard to obtain it, he will be much more likely to know its true value than the person to whom it has come without any effort of his own.

It is said that women as a class do not know the value of money and are prone to spend it foolishly. As far as my acquaintance goes this is not true. Certainly, if the want of money can teach its value, many women would have learned the lesson thoroughly. Every wife who is housekeeper, seamstress, nurse, etc., earns a fair salary, and should have it, to spend as she pleases. There is a pleasure in receiving money at regular intervals which you feel you have earned and have the right to do with as you please. When a man is earning a regular salary it is an easy thing to make an estimate of the expenses of the household and each pay-day let the wife have a regular allowance. She will soon learn business habits, to look ahead, and to save one month for additional expenses which she knows are coming the next. With the farmer it is not so easy; but his wife ought at least to have the money from butter, eggs and chickens sold to do with as she pleases.

It is well to begin to teach the children when they are quite young. As soon as they are old enough to do little chores pay them a stated sum every week, if it is not more than five cents, and let them begin to learn the value of money. Insist upon their buying some necessary things with a part of their money, according to the amount earned, if it is only their school-pencils, and giving, if but a penny at a time, to church or Sunday-school. The remainder can be spent as they choose; but if they spend too much for trifles let them feel the need of some necessary until they learn better habits. While I would not teach children to hoard their money, yet they should learn to save for future needs. They get much more pleasure from giving Christmas and birthday gifts to their friends if they can buy them with money they have earned, and perhaps have saved by some self-denial. If they make mistakes, as they no doubt will at first, and buy carelessly, they will learn by experience, and the lessons will be remembered. The habits of thrift and generosity thus established in childhood will be invaluable in all their after-life.

MAIDA McCL.

DAINTY WORK-BASKET FOR YOUNG GIRL

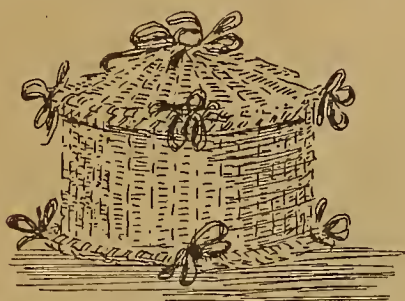
Seldom indeed do we find a young girl who will not be delighted with the gift of a dainty work-basket, including all the little sewing accessories. Many a girl who has despised sewing when it has only come to her with needle, thread and ill-fitting thimble has been coaxed into a lasting fondness for sewing and not a little skill in the art by a tempting gift of this sort.

We look with longing eyes at the baskets displayed in the different stores—longing eyes because of the prices which are preventing us from indulging our fancy.

Those of us possessing ordinary skill with the needle, however, can fashion as dainty a basket as any of those seen in the stores at perhaps one fifth, or sometimes one tenth, of the cost.

Fortunately expensive materials and accessories do not always add to the beauty of the basket over those less expensive. Nowadays one needs only good taste and an eye to the harmony of color to work out very satisfactory results at a small expenditure.

Illustration No. 8 shows a basket in garnet and black, the effect produced being rich and handsome, while illustration No. 9 shows a basket in pink and white, the effect in this case being light and dainty. Of course, the first



No. 8

will be much more serviceable, as it will not be affected so largely by light and dust as will the second.

The baskets popularly used are of the plain and more substantial ware rather than of the light, frail and expensive material, which may look pretty for a day, so to speak, but which soon chips off here and there and grows shabby. With trimmings of baby ribbon and thin silk even the plainest basket can be made to look dainty and pretty.

First make a cotton-lined pad of garnet India or other silk, for the bottom of the basket, which itself should be a rich red in color. The different sewing accessories should be a combination of garnet and black, and should be tied in their respective places along the inner sides of the basket with double bows of garnet baby ribbon.

The basket should contain some or all of the following: For the thread choose white and black, because the spools used for linen thread are of a dark red shade; the emery may be a dainty red strawberry; the wax in imitation of a blackberry; the pincushion in imitation of a lovely ripe tomato, and a paper of pins included, or else a design in pins made on the already mentioned pincushion. A tape-measure (nickel case) must not be omitted, and can be daintily suspended from the side of the basket with ribbon. A tiny, well-filled needle-book of red silk with scalloped leaves of white flannel will look better than simply a paper of needles. And we must not forget a pair of shining scissors. For convenience sake run ribbon in and out along the center of the cover, and on the inside through one of the loops place the scissors, through another loop a black celluloid thimble, and on the other side of the scissors, through another loop, place a fine black-enameled glove-darner. A large stocking-darner, also black, should be placed, because of its size, in the bottom of the basket. Other things may suggest themselves, but the above are the most essential. Dainty bows of ribbon should ornament the corners and cover of the basket.

The pink-and-white basket should be fitted up with a pad of pink silk, and the accessories tied in with pink and white ribbons. The thread can be of white, the emery of white (berry-shaped), the wax a white acorn, and the stocking and glove darners of white enamel.

It is hardly necessary to go into further details, for upon the individual taste much depends. All the little ac-

cessories described cost but a few cents apiece, with the exception of the scissors.

Taking everything into consideration one could hardly find a daintier or more suitable gift for a young girl.

EMMA LOUISE HAUCK ROWE.

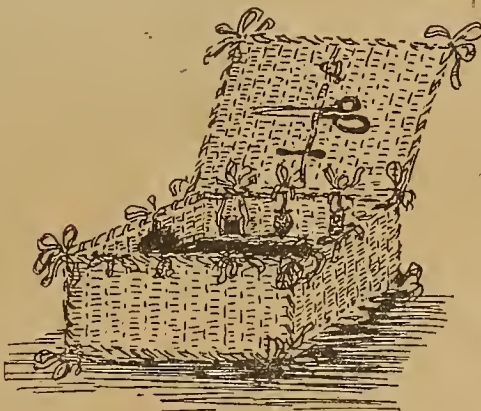
AN EVENING CALLER

As I was reading one evening a caller came through the open door, not even pausing on the threshold for a "Good-evening!" I at once gave my caller a hearty welcome, for I recognized "Polly Phemus, Widder Phemus' daughter," as the country lad named her, and I was delighted with so distinguished a caller. Since then I have been fortunate in finding the larva and watching the building of the cocoon; also the exit from the same, and the development of the perfect moth. Perhaps you may receive a like caller and would like to know more of her.

The Polyphemus belongs to a family of spinners (Bombycidae), having feather-like feelers, fore wing broad and large, body stout, head sunk in the woolly chest. Its larva is large, bright green, with silvery tubercles and with oblique white stripes on the sides, often found feeding on the leaves of the maple, elm, apple, oak and hestnut, of which it consumes an enormous quantity; and this is one of the reasons why the Polyphemus has not proved a commercial success.

The caterpillar spins a cocoon of a yellowish-white color, fastening the silken threads to leaves. After the leaves dry and the wind takes them from the cocoon they still leave the imprint of their veins, so the outside of these silken homes are beautifully carved. One caterpillar, not finding suitable leaves, fastened her cocoon to a peanut-shell and grass, making a very unique home with a piazza attached. You may often find these homes after the leaves fall, and by taking them to your homes watch the unfolding of the moth—a rare treat when seen for the first time. The exit from the silken home occurs in the month of May.

The moth is of ocher-yellow color, with darker trimmings, the fore wings having a small, transparent eye bordered with yellow, and that with a dark line. The hind wing has a larger transparent eye surrounded by yellow, and that by a wide, dark border, reminding one of the eyes on the peacock's feathers. Although not as large as their relatives, the Cecropia, they are considered more beautiful, and are more abundant; but they are of no more value than the Cecropia, for the reason already mentioned, and also that it has been found a very difficult task to unwind the silk from the cocoons, as it is very



No. 9

compact. A Chinese relative, somewhat resembling the Polyphemus, has proved a more valued species to cultivate, for, like the people of China, it can live on less food than its American neighbor. If you have access to an arc-light, by all means study the moths. But even a lantern on your piazza some summer evening will attract numerous visitors of the moth family that cannot fail to interest you.

REST H. METCALF.

THE ANNOUNCEMENT-CARD

We are told to "rejoice with those who do rejoice, and weep with those who weep." Gladly would we do this, but how many times it is that we know not that there is any special occasion for rejoicing, or any cause for mourning, till the time has long since passed. Then we greatly regret that we had not the opportunity of offering congratulations or sympathy.

How inexpensive is the simple announcement-card; yet what a source of comfort! There is nothing that keeps the bond of friendship so compact as this simple missive. A beloved school-mate—a dear friend—marries, and in the busy whirl of life is lost sight of. One day there comes to us an envelop inclosed in another one; the inner one contains a card which reads thus:

Rejoice with us
William Henry Van Vleet
Born March 14, 1898
St. Louis, Mo.
Gail Hamilton Van Vleet
Edward Samuel Van Vleet

At once do we sit down and pen our heart-felt congratulations to the happy parents, and our hearts ascend in prayer to the Giver of all that the little one may be a source of comfort and a great blessing to the father and mother. And in some way we are certain to place the emphasis on the word mother.

These birth-cards must be planned for beforehand; and what could more intensify the love the mother bears for the coming one than this very preparation. In the days and weeks when she is tenderly sheltered from outside cares and turmoil, what loving thoughts and tender memories are woven into the task of preparing the list of friends, that none be omitted. And who shall say that these loving, tender emotions will not have their imprint upon the plastic mind of the little one.

Knowing that her many friends will send her their congratulations and wish her "much joy" in the new-found possession, she endeavors to do her part toward causing their desires to come true. She knows "that it is the right of every child to be well born." She realizes also that she will be responsible for many of the beautiful traits or character blemishes of the child. Her responsibilities have not been lightly assumed nor lightly thrust aside. She endeavors to abstain from worrying, fretting or repining, trying to look on the bright side of everything.

I had almost said that it was an unnatural wife who did not desire children, but perhaps that is putting it too strongly. But these precious treasures should be well equipped for the battle of life. They should be endowed with strength—mental, moral and physical. The absence of any one of these will make future success well nigh impossible. Nor does all the responsibility at such times rest upon the mother. Aye, far too long have the fathers shirked their responsibilities in the matter; but the world is waking up to the fact that the father should look well unto their ways, and be most tender and sympathetic with their wives, and lend his aid in preparing these announcement-cards with all this means.

ELLA BARTLETT SIMMONS.

COCOA CARAMELS

Put into a saucepan over a moderate fire two cupfuls of molasses and one cupful of sugar, with butter the size of half an egg. Put three tablespoonfuls of cocoa and one tablespoonful of corn-starch into a cup, and gradually mix it with one half cupful of sweet milk, stirring until it is smoothly mixed. Stir the mixture slowly in with the contents of the saucepan, then stir it while boiling until a bit of it dropped on a buttered tin will harden like thick wax. Boil a minute longer (no more), and then pour out in a large buttered pan. Set it in a cool place, and when nearly cold cross it off with a buttered knife, so that it will break in squares when quite cold. Keep in a cool place (if you can keep them). If time is plentiful it may instead be worked into little cubes and wrapped in squares of buttered tissue-paper when just cool enough to handle.

P. W. H.

THE TIME TO PLANT CURRANT AND GOOSEBERRY BUSHES

It is especially desirable to set out currant and gooseberry bushes in the fall, as they begin growth so early in spring. Plant in rich soil if large berries are desired, in rows three feet apart each way, giving each plant a forkful of strawy manure, to prevent heaving by frost. The acids which these fruits furnish are extremely healthful.

[HOUSEHOLD CONCLUDED ON PAGE 19]

AN ALABAMA YANKEE

By Francis Lynde

CHAPTER II.

THE ISHMAELITES

THE moon had gone down when Alan followed his guide across the railway-track. What time the soldier was with him he managed to control himself; but when he was set at liberty beyond the picket-line frenzied rage took possession of him, and he ran blindly, stumbling into ditches, vaulting the fences, and storming the mountain-side when he came to it as if it were a fortress to be taken by assault.

He did not stop to reason about the thing which he believed had happened; was quite past remembering that it was no more than a soldier's duty to fire on an escaping prisoner. In the remorseful rage he remembered only that he had humbled himself to beg a boon of an enemy, and that in the midst of the humbling Dick Garth had ordered his men to fire.

So it came about that after the stiff climb up the mountain began to blow the rage-heat clear there remained a glowing forge-fire resentment, with Dick Garth—all the Garths—for the iron in it.

Alan was only a boy like other boys, but he was the son of a mountaineer, and if the traditions are to be trusted, the mountaineers, Covenanters or Redemptioners, have still a drop or two of Gaelic blood in them. And that blood is notably fierce and unforgiving, as history testifies.

As a matter of miles and furlongs the shortest way home was up the path which the mountain folk used for a cut-off; but blind rage is ever a poor guide, and when Alan reached the foot of the rampart cliff he found himself on Jasper Garth's land, near the crevice path down which he had plunged with the runaway. Rather than skirt the cliff in the thick darkness of the forest, he finished the crevice path, meaning to go home by the road.

At the top of the path, which was directly opposite the Garth house, there was a surprise lying in wait for him; a surprise and a shock that sent him flat on his stomach behind a clump of low-growing laurel.

Two hours earlier the house might have been uninhabited for any sign of life there was. But now everything was astir. There were lights, and shadowy figures running to and fro, and a red glow in the windows of the detached kitchen, and a squalling of chickens in the barn-yard.

Also, there were groups of men on the wide front porch of the farm-house, and the road was half full of tethered horses.

Alan put two and two together—the men and the houses, the kitchen glow and the squalling chickens.

"It's the cavalry patrol, and old Jasp' Garth is giving 'em a late supper," he scoffed. Then he wormed his way out of the laurels to get a better view-point, and the horses seemed to multiply themselves indefinitely. "My—oh! there's a whole regiment! 'N' they must be conscripts, too, the way they leave their horses without a guard. B'lieve I'll dodge over there and see what regiment it is," he said.

It was no trick at all to pick a place where the horses were thickest and dart unseen across the road. But when he was fairly in the cavalcade holdness gasped and fled. These were no cavalry mounts. They were wiry upland ponies, with no two saddles alike—the horses of the bushwhackers.

Alan dropped as one shot, and held his breath until he was clear of the cavalcade; held it until it exploded in a hurst of terror once he was out of sight and hearing and racing along the half-mile of sandy crest road on the home-stretch.

"Pity's sake! It's all true what they've been telling about old Jasp' Garth! He does harbor Seth Byers' hushwhackers. They're killing chickens and cooking supper for 'em now!"

One would have had to live at the time to appreciate the horror and detestation in which the guerrillas were held by law-abiding people of all parties. Like the Ishmaelites of old, their hands were against any man who had anything worth carrying off; and those who gave them aid and countenance justly shared their obloquy.

It was known in the neighborhood that Seth Byers was a kinsman of the Garths; and out of this and Jasper Garth's past immunity in the Byers' raids had grown an ugly rumor—a rumor to the effect that the lame old man was in league with the marauders.

Alan ran on, with panic to speed him, a dreadful possibility overshadowing for the moment the remorseful heartsoreness. It was but a three-minute gallop from that to this; what if the bushwhackers should conclude to top off their feast with a raid on the "Alabama Yankee?"

There was a light in the home kitchen, and he saw it from the orchard gate. He knew

what it stood for—that they were sitting up for him; and in the turning of a leaf the panic subsided and the remorseful heartsoreness came to its own again. How could he go in and tell them that he had failed; that he had come back with the life of the fugitive to answer for?

"Is that you, Alan?"

Alan had got no farther than the gnarled old apple-tree half way up the walk; to the tree, and the long grass under it tempting him to dig himself down to wrestle it out with his face buried in the dewy tangle.

He sat up at the word, and was glad that the miserable story of the failure could be told first of all to his father alone. He told it bravely, shielding himself not at all.

"If I'd only had sense enough to be just a little more careful," he grieved, at the end of it. "I ought to have known that every foot of the river-bank would be picketed to-night."

"Oh, I don't know about that, son. You're tired and worn out now, and you can't see it fair. If you had waited, as you say, for the moon to go down you would have stumbled upon the picket just the same."



THERE WAS A LIGHT
IN THE HOME
KITCHEN

"YOU-ALL TAKE A FOOL'S ADVICE AN' LIGHT OUT. AN' DON'T WAIT"

"I know; but I'll always be afraid there was a chance and that I lost it. And then to think that I 'most went down on my knees to Dick Garth!"

Stephen Joyce stooped and lifted the boy to his feet, and there was comfort in the way he did it.

"That is the one thing you needn't be ashamed of, laddie. We mustn't be vengeful." Alan hung his head. Then a sudden impulse prompted him to say:

"Don't you ever get vengeful, father?"

The old man, with the stern Covenanter face and penthouse eyebrows, set his teeth with a little click that was audible.

"I am your grandfather's son, Alan, lad; and he used to say that he never forgot a friend or forgave an enemy—that he paid his debts. I've had to fight it sore all my life—sorer than ever since Jasper Garth turned against us. It's right hard sometimes to believe that he is justifiable, even according to his lights."

"I don't believe it," Alan objected. "If you'd seen what I have to-night you would say there wasn't anything too low-down for a Garth to do." And therewith he told of the meeting with Jasper Garth, and of the discovery he had just made.

Oddly enough, he thought, his father made no comment other than that which was implied in a brief question.

"Are you right sure nobody else saw you with the black boy?"

Alan said he was, knowing not that three pairs of ambushed eyes had seen the encounter with Garth at the wagon-gate, and there the matter rested.

"You'd better go to bed and get what rest you can," said the father. "There'll be troublous times for us, likely, when the Lincoln men begin to cross the river. Good-night."

Alan went in at that, and was thankful to find the kitchen empty when he entered to light his bedroom candle. Of course, his mother and Mary would have to know about the failure, but he felt that the pitiful story would not bear a retelling that night.

His room was in the half-story above-stairs, in the undivided portion of the low-posted loft extending over the two original rooms and the passage. Only his part of it was floored. The space over the kitchen was used as a catch-all, and that over the passage was empty.

He went quickly to bed, but was too tired to sleep. The light breeze of the night's forenoon had died away, and the stillness was of the sort that dins in the ears and magnifies the season-snap of drying timbers into pistol-shots. It was blessed relief when he heard his father come out into the passage to begin a slow sentry-heat back and forth; and it was some indistinct impression that the footfalls had ceased which brought him awake out of his first doze.

The footfalls had ceased, but presently the strained sense of bearing picked out a sound like a low murmur of voices. Under the circumstances everything unusual was alarming;

"I didn't get the straight of it precise. The way it come to me I 'lowed that somebody at Jasp' Garth's had seen 'em an' told Seth. Sez he to me, 'Lishe, you jest sashay over t' the Joyce place an' see how the lan' lays. He's been runnin' off niggers ag'in—his boy took one through to-night—au' I 'low we'll have to give him the hickory.' 'Who, the boy?' sez I; an' he sez, 'Shucks! no; the old man hisself, of cou'se.' So at that I climbs the hawss an' puts out."

The man stood up and flung the bridle over his horse's head; and Stephen Joyce rose with him.

"You know what I think of you and the company you keep, Elisha; but you've done a neighborly thing to-night, and I sha'n't forget it. You may tell your chief that I've refuged; it'll be true by the time you're telling it."

"I know you don't think much of the 'Free Comp'ny,' Cap'n Joyce, an' I don't know as I blame you. Sometimes I wisht I was out of it. 'Bout the other, I hain't forgot how you stuck up for me that time five year ago whenst they was a-goin' to send me to the penitentiary for stealin' a hawss that I didn't steal."

He swung up to the saddle, and his stirrup-word was of warning. "Good-night, Cap'n Joyce. You-all take a fool's advice an' light out. An' don't wait."

Alan got the sense of all this, which was rather reassuring than disquieting. It meant that his father would have to go into hiding again, as he had thrice before, and that a present harrying of the home farm by the guerrillas would thus be averted.

Since comfort, even of the negative sort, is a good opiate, Alan slept very late the following morning; and when he went down to breakfast was not surprised to find his father gone.

"Where's mother?" he asked, when Mary came in to pour his coffee and rake the potatoes out of the ashes.

"She's down at the spring-house."

"Has father gone to the old place—to Nick-a-jack?"

Mary nodded. She was a quiet little maid, sparing of her words and belonging to the sisterhood of those who take themselves and the world rather seriously.

Alan ate industriously for a few minutes, and after a time said, "I reckon father told you-all what happened last night?"

Mary nodded again. She felt the hurt of it—Alan's hurt—and was willing to spare him the pain of repetition.

"I s'pose we're to run the commissary for father, same as usual?"

Mary struggled with the word, quelled it, and said, "We're to take him a basket of things to eat this evening, if that's what you mean."

Alan drank his corn-coffee without a grimace, and passed his cup for more; or rather was in the act of passing it when a sound that was scarcely more than a tremor in the still air floated in at the open windows, jarring the sashes a little as it came. Alan pushed his chair back and sprang up.

"They're at it!" he hurst out, and before the concussion came again they were both out on the flat rock at the cliff verge, with the three-state panorama spreading itself before and below them.

At first sight and to the unhelped eye the valley was a picture of peace. True, there was a line of smokes along the railroad, as if the section-men were burning discarded cross-ties, and these Alan interpreted.

"See, Molly; the Johnnies are burning the culverts and little bridges. They're ruining the railroad, so it won't be any use to our army." He said "our army" proudly, thinking of Lieutenant Robert, and of what his father had done and suffered for the cause.

"Huh! That won't make any difference," said Mary, calmly. "Our men can fix bridges 'r' 'most anything. Edna Rye'son says that's all they can do—just make things and fix up old broken ones."

"Don't you believe it!" asserted Alan, loyally. "They can fight, too. Don't you recollect what Boh said in that letter that was smuggled through by the Underground? How he lost ten men out of his company at Perryville 'cause he couldn't get 'em to fall back when they were ordered to?"

Mary remembered it, but her assent was wholly mechanical. Her sharp little eyes had finally located the birthplace of the jarring concussions. There was a sugar-loaf hill just beyond the ferry-landing opposite Shell-mound, and from its summit balloon-shaped smoke-puffs were rising at regular intervals. She shared the discovery at once, and Alan nodded.

"They're shelling the woods on this side so they can cross. Can't you see a string of black things close up under the bank just below the ferry. There are a lot of 'em—boats or rafts, I can't make out which. Whoop-ee! There they come!"

One end of the string of rafts swung slowly out into the stream, with the men tugging at the sweeps; and a Confederate battery on the south bank promptly opened fire.

Alan dashed across to the house and got an old telescope which had been his grandfather's. It was badly battered, and since the correcting-lenses in the eye-piece were missing it had the disadvantage of presenting objects upside down; but it was better than nothing.

His hauds shook so that he could scarcely

focus the glass; and when it was adjusted he was generous enough to give it to Mary, making a tripod of his shoulder for her.

"Find the place, quick, and tell me what you see!" he commanded; and she obeyed like a faithful subaltern.

"I see them; they're nearly across, some of them. They're rafts, and they're just fairly black with men."

"But the battery—the Johnnies' battery! Is it killing many of 'em?"

"I can't tell. You see, everything's upside down, and I can't tell where to look for the cannons. I s'pose they're up in the sky somewhere. Here, you take it."

Alan took the glass and swept the "sky"—otherwise the river—from raft to raft.

"They're shooting wild—awfully wild," he announced. "The shells are going 'way under the rafts—that is, over 'em, I mean."

He had to be continually correcting the vagaries of the telescope.

"Here comes the first one bump up to the landing. Hurrah! hur—"

The cheer broke in two in the midst. Spinning around at a lurch on his shoulder he found himself confronting a lame man, with a face like a tart winter apple, and shrewd gray eyes that had a trick of looking through and beyond one.

"I sh'd think you might find something better to do than to be cheerin' round because the Yankees are coming," he said. "Where's your pa?"

Alan scowled and would have stalked away but for Mary and the fact that there was nowhere to stalk save over the cliff.

"He isn't home," he said; and there was all the ungraciousness in the reply that could be crowded into four words.

"When he comes you tell him that I want to see him; that I've got to see him. D'ye hear?"

"I can tell you he doesn't want to see you, Mr. Garth."

In the vanished days of friendship the old man with the winter-apple face had always been "Uncle Jasp" to the Joyce younglings, and Alan emphasized the "Mr." with true Southern bitingness.

"That don't make any difference. I've got to see him. You tell him so."

Jasper Garth hobbled away along the sandy road, and Alan wondered a little at the effrontery of the family enemy in coming to demand an interview with his father after all that had occurred. Wondered a little, but not much, because the more wonderful thing taking place in the valley speedily swallowed up all smaller concerns.

Barring the time spent in eating a bite at noon the whole day was filtered through the battered telescope for the two on the cliff verge; and late in the afternoon, when they started down the mountain with the basket of provisions for their father, Alan thought he had some idea of the magnitude of an army.

The scramble down the mountain to the valley level was without incident. They had reached the country road at the foot of the talus, and had traversed it to the point where Alan had crossed it with the runaway the night before.

The still calm of the summer evening was in the air, and it was hard to realize that the day-long inpouring of armed men into the valley was anything more than a fantastic dream or a vagary of the battered telescope.

But the realizing was presently helped out in a way to banish all doubt, and self-possession with it. They had passed the last turn in the quiet wood road; could see the yawning, misshapen mouth of the great cavern and feel the first fannings of its cool breath. They put the basket down for a final change of hands. In the act Mary said "Oh!" and when Alan straightened up a man in a dusty uniform was barring the way with his musket.

[TO BE CONTINUED]

2

LIFE AT BALMORAL

For nearly half a century Balmoral has had a great fascination for the Queen. Perhaps it is that in the Highlands Her Majesty can live quietly and simply, untrammelled by court pomp and undisturbed by a thousand things which enter into her life at the heart of the empire. Or perhaps it is that here she is reminded of those early years of wedded happiness when her consort was all the world to her.

Balmoral is rich in memories for the Queen. It was Prince Albert's gift. The Queen had been anxious for an estate in Scotland, and wished to buy an estate on Loch Laggan; but Prince Albert prevailed upon the young monarch to wait a few months, and then the Queen saw Balmoral. She fell in love with the castle at first sight, and it being highly recommended by the Queen's physician, Prince Albert purchased it from Lord Aberdeen for £31,500. Since then the Queen has purchased considerable property adjoining the Balmoral estate, and she has now forty thousand acres on Deeside, running for six miles along the river-banks. Balmoral, in fact, may be said to be the Queen's own village. She has erected many cottages on her estates, and is in close touch with the life of her tenants, all of whom agree in describing their royal land-owner as the kindest landlord in the world. Here and there one comes across some token of the royal

ownership, in the shape of a monument or a tablet, such as the one, for example, in the pine wood adjoining Balmoral. Tradition, which has much to say about the Highlands, tells that once upon a time the forest was sold for a tartan plaid, and Her Majesty has inscribed on a stone denoting her entry into possession the words "The bonniest plaid in Scotland."

Every year since she first visited it in 1848 the Queen has grown to love Balmoral more and more. "Our dear Balmoral" is the way she refers to the castle over and over again in her letters; and she wrote, in 1856, when Prince Albert was still alive, "Every year my heart becomes more fixed in this dear paradise, and so much more so now that all has become my dear Albert's own creation, own work, own building, own laying out, as at Osborne, and his great taste and the impress of his dear hand has been stamped everywhere." And now that Prince Albert is dead, Balmoral, his Balmoral, is the place where the Queen loves to spend her birthday and his. One of the heights above the castle is crowned by an Albert memorial of white granite, and in the grounds stands a statue of the Prince in bronze near a statue of Her Majesty.

It was here, too, that the Queen's eldest daughter became engaged to the Crown Prince of Germany, who afterward became the Emperor Frederick. The Prince declared his love by giving the Princess a sprig of white heather, and the place where they plighted their troth is still marked. It was here, too, at a spot also marked, that the Marquis of Lorne became engaged to another daughter of the Queen. Here also the first child of the ill-fated Prince Henry of Battenberg was born—the first royal child born in Scotland since 1600; and here the Queen received the news of the deaths of the Duke of Wellington and the Prince Imperial, the fall of Sebastopol and the battle of Tel-el-Kebir. So that the gray granite palace abounds in memories and monuments, and there is no wonder that the Queen loves her Highland retreat. Simple as its interior is, it is an ideal home even for a queen, and there is not a fairer scene in Scotland than from the Balmoral heights.

The Queen herself has described it. "We went up to the top of the wooded hill," Her Majesty has written, "opposite our windows, where there is a cairn, and up which there is a pretty winding path. The view from here, looking down upon the house, is charming. To the left you look toward the beautiful hills surrounding Lochnagar, and to the right toward Ballater, to the glen (valley) along which the Dee winds, with beautiful wooded hills, which reminded us very much of the Thuringerwald. It was so calm and so solitary it did one good as one gazed around; and the pure mountain air was most refreshing. All seemed to breathe freedom and peace and to make one forget the world and its sad turmoils." The beauties of nature are more than compensation for the absence of artificial grandeur inside the castle. The halls and corridors are decorated simply. A few busts and life-size statues; a few stags' heads, shot by royal guests; a few colors of Highland regiments; a few swords and targets and plaids—that is all. Only the ballroom is suggestive of royal grandeur.

The Queen's life at Balmoral is correspondingly simple. State business, drives and visits to her tenants fill up her day. Her Majesty deals only with such dispatches as it is necessary she should see when at Balmoral, and devotes the early morning to state affairs. Occasionally she will breakfast in a small cottage, built of lath and plaster, close to the castle; but this is a treat she does not allow herself now so often as she used to.

After breakfast she receives the dispatches brought by her special messenger from London. The mail arrives at Ballater at 11 A.M., and a fast horse is in waiting, with a yellow gig bearing the letters "V. R." Then, state business disposed of, Her Majesty reads the papers or has them read to her, and generally arranges for certain paragraphs to be cut out and added to her scrap-book. Occasionally this may be done in the open, Her Majesty having had a movable room made in which she can be taken to any part of the grounds. The room is twelve feet square and has sliding walls.

Before lunch the Queen invariably goes for a drive, and again in the afternoon she is driven out. The estate is laid out with carriage-roads, but Her Majesty prefers to ride along the public roads, calling on her tenants by the way, or visiting Mar Lodge, the autumn residence of the Duke and Duchess of Fife, a few miles west of Braemar.

In the evening music is Her Majesty's chief employment. Tableau entertainments are very popular at Balmoral, royalty and nobility frequently taking part in the performances. An Arab encampment, a scene from "Macheth" and a scene from "Faust" were three of the living pictures shown at one of these entertainments during a recent visit of the Queen. On such occasions the Queen's servants are usually present, either as performers or spectators. Dinner follows at nine o'clock, the bag-pipes playing the while, and then the Queen's day comes to an end.

The happiest feature of the Queen's life at Balmoral is the keen womanly interest Her Majesty takes in the life of her cottagers. All marriages, births and deaths taking place on her estate are reported to her, and the

Queen—though not so much now as in former years—finds great enjoyment in calling upon the cottagers, as neighbor calling on neighbor. There is hardly a cottage in which Her Majesty has not been, and the tenants are never tired of telling how the Queen of Great Britain and Empress of India surprised them by driving to the door one afternoon and inviting herself to tea.

The story is told that one of the Queen's tenants died about the same time as Prince Albert, and on her next visit to the castle, a few weeks afterward, Her Majesty called upon the widow. "We both cried," said the old lady, in relating the incident. "The Queen cried, and I cried. I controlled myself as soon as I could, and asked her pardon for crying; and oh, she said she was thankful to cry with some one who knew exactly how she felt. 'You saw your husband's death coming,' she said, 'but I—I did not see mine; it was so sudden!'"

When one of the cottagers was ill not long ago the Queen, who is kept well informed of such things when away, telegraphed from Windsor that everything was to be done for her. "If you have been suffering from any illness," says one of these happy cottagers, "when the Queen sees you she always remembers it, and inquires concerning your health—not only kindly, but with a particularity which shows that her interest is not merely formal. She does not confuse your neuralgia with rheumatism, nor inquire as to the welfare of your broken arm as if you had had a fever."

There was a tragedy on the Balmoral estate some years ago, a young guard slipping into the river while fishing. He was drowned, and on the day of the funeral the Queen drove to the barracks and placed a wreath on the dead guard's coffin with her own hand. As the funeral procession passed to the churchyard the Queen stopped her carriage and watched it until it had disappeared from sight.

The Queen has been present at many christenings and weddings on the estate, appearing sometimes quite unexpectedly; and more than one child has been named after her at her request. She has a little namesake at the manse at Crathie, and on her birthday, a few years ago, Her Majesty sent the child of the manse the central ornament of the royal cake. But children are puzzling things, and it is not surprising to know that the Queen was once unpopular with one of the cradle autocrats of Balmoral. Her Majesty had expressed a desire to have the child of one of her tenants named Victor, and though the christening had already taken place, the certificate was altered and the little fellow was given the name suggested by the Queen. Victor lives in the woods, and when he was three years old, the Queen stopped at the house for tea, and asked naturally for Victor. The little fellow was brought, but his loyal mother trembled when he cried loudly and shook his fist in the face of the Queen. This little lad has also been honored by a call from the czarina and some of the English princesses, whom the Queen had evidently told of the child's rebellion.

The Queen's Sundays are always quietly kept, and she has been known to refuse to attend church when at Balmoral because of the objectionable way in which tourists behave, making the day more like a week-day holiday than the Sabbath. Her Majesty has always been a strict Sabbatharian, and she takes such an interest in Crathie church that when a new minister was wanted she was asked who would be most acceptable to her. At first the Queen refused to interfere with the free choice of the people, but intimidated, after some pressure, that either Mr. Blank or Mr. Blank would do. The church is, of course, a Presbyterian, it being the privilege of a queen to belong to every "national" church in her kingdom.

The minister in charge is Rev. J. Ramsay Cuthbert, but the preachers vary on the occasions of the Queen's visits. Dr. Donald Macleod, Dr. Cameron Lees or Dr. W. W. Tulloch frequently occupy the pulpit. The Queen is generally accompanied at church by Princess Beatrice and a grandchild, who sit with her in her own pew. As Her Majesty enters the minister makes a slight bow, and the service begins with a psalm. Then prayer follows, and lessons from the Old and New Testaments, read from a handsome lectern. An anthem follows, and then come the intercessory prayers, in which the blessing of God is invoked on the Queen and the royal family. After more singing, during which the Queen generally sits, comes the sermon.

The preacher is usually brief, and the sermon is followed by a hymn and prayer, the service then closing with the benediction. The Queen is supplied beforehand with the hymns and lessons and the preacher's text. She follows the service very closely throughout. "The second prayer was very touching," she once said to Dr. Macleod; "his allusions to us were so simple, saying, after the mention of us, 'Bless the children.' It gave me a lump in the throat, as also when he prayed for the dying and wounded, the widow and the orphan." The service is sometimes held in the house, in a room built for the purpose, and on such occasions the congregation consists of about thirty, and the Princess Beatrice leads the singing on the harmonium. The preacher for the day is often included in the Queen's dinner-party in the evening.

The Queen takes a very real interest in the servants of her household, who have formed an ambulance class and a carving class at her special request. More than once she has stopped her carriage to speak to a servant she has met in the grounds, and some years ago she invited the whole of the household at Balmoral to Windsor in parties of ten. At Balmoral, indeed, the Queen may be said to take off her crown and declare herself to all the little world around her as a simple womanly woman.—Boston Transcript.

2

FAMOUS BELLS

Spain has a bell which is its prophet. It is its soothsayer, oracle and guide. This bell, the famous Vilella, has hung for centuries in a historic castle, keeping watch over the nation.

It is the most celebrated bell in Europe. Its fame rests not so much upon its notes, though these are high-pitched, soft and clear; nor upon its size, for there are other bells in Spain much larger; but upon its individuality. The Vilella has for centuries foretold any impending trouble to the nation. When the father of little Alphonso died the Vilella began tolling in the night, and tolled until morning. In the ten years' Cuban war the bell struck awful tones on the nights of defeats, and when great fires have touched the castle and sickness and insurrection threatened the throne the Vilella has lifted up its voice in sudden, loud warning.

Last winter the Vilella tolled again. It was one short, quick stroke. Only a few heard it, but they ran to tell the tidings. Did it mean more disaster in Cuba? Was the war to drain the royal vaults beyond penny to debt? The Vilella would not tell, but it sent out its warning note.

Russia has a coronation-bell, which is the largest in the world. It hangs in the Kremlin. It is the Emperor's bell, and it rings only in honor of him. At the coronation it pealed forth as the Emperor entered the church; and its voice announced the conclusion of the ceremony to the whole of Russia. The coronation-bell is rung by a bell-ringer blessed by the Emperor, the head of the church. The bell-ringer does no other work, and is always on duty to tell of important events in the family of the Emperor.

Of late he has been busy polishing up the bell for special happenings. He rings when His Majesty goes to church, and, in case of the death of a Russian monarch, the Kremlin bells toll constantly between the death and the time of the funeral.

Since Russia is the home of bells it is not wonderful that it should hold the largest unused bell in the world. This bell now makes a building in the Kremlin. It was cast two centuries ago, but was found too heavy to remove from the pit. The Russian monarchs, one after another, tried to have it lifted, and hundreds of lives were sacrificed in the shifting pit of sand. Finally fate intervened. A fire broke out and heated the bell in its pit. A quantity of cold water flowed in around it, and a great piece, the size of a door, was broken out of it.

The most famous bells in France are those of Notre Dame. The bells of this cathedral are the largest bells of fine tone in the world. One of them weighs thirty-five thousand pounds. The maker who cast it would never disclose the secret of its loud, sweet tone.—The Sunday-School Visitor.

2

THOSE QUEER CHINESE

White worn as mourning.
Boats drawn by men.
Carriages moved by sails.
Old men fly kites.
Seat of honor at the left.
Hats worn as a sign of respect.
Family name comes first.
The compass points to the south.
Soldiers in petticoats.
Horses are mounted on the right side.
Visiting-cards four feet long.
School-children sit with their backs to the teacher.

Babies that seldom cry.
A married woman when young is a slave, when old the most honored member of the family.

A coffin in the reception-room.
Fireworks are always set off in daytime.
If you offend a Chinaman he may kill himself on your door-step to spite you.

The Chinese divide their medical prescriptions into seven classes: First, the great prescription; second, the little prescription; third, the slow prescription; fourth, the prompt prescription; fifth, the odd prescription; sixth, the even prescription; seventh, the double prescription. Each of these recipes apply to particular cases, and the ingredients are weighed with scrupulous accuracy.—Philadelphia Record.

2

SAMOAN SENTIMENT

A fad of the young men of Samoa is to wear the name of his sweetheart tattooed upon the forearm. As the Samoan wears no sleeves this ornament is always visible, and he is very proud of it, which is easily understood, as the young lady herself does the tattooing, it being impossible to intrust to a professional workman a task so full of sentiment.

IN CALICO

They've sung the song of the girl in pink
And the song of the girl in white,
But the singers are few who have praised the true
Goddess of love and light;
The household fairy whom we all know,
And knowing her love her the better so—
The girl in the garment of calico,
Dainty and sweet and bright.

The bloom of her cheeks, the light in her eyes,
Is her beauty and title of health;
And day after day, in a modest way,
Her neatness is better than wealth.
Old-fashioned? Yes, and we wish her so,
For just like her mother in calico,
With the gentle traits of the year ago,
She's taken our hearts by stealth.

So in a nectar of roses I pledge
Our dear girls in pink and white;
To their eyes and their hair and their ways debonaire
I offer my homage to-night;
Yet deep in my heart I feel and know
A loftier feeling continues to grow
For the girl in the wrapper of calico,
Dainty and sweet and bright.

—New York Sun.

CHINESE FUNERALS

When the armies of the world finish with China it is safe to say there will be many Chinamen to bury. Chinese burial customs will demand their interment in log-like coffins which after the corpse is placed within are tightly sealed; and, strange to say, they lie out of doors often for months, awaiting the time when the families of the deceased can afford an elaborate burial.

Chinese funerals and burial customs are in many respects similar throughout the empire. The coffins can be seen lying about just outside many of the houses. No odor escapes from them, for they are tightly sealed with mortar or some other substance, and within the body lies in a preparation of quicklime. Some of the families keep the coffins and their occupants inside their homes for perhaps a year. It is, however, not considered disrespectful in many sections to allow them to remain outside.

While all of these queer coffins are shaped like logs, there is a great difference in quality. One can be purchased for ten dollars, while another may cost one thousand dollars. Some are beautifully carved and made of expensive wood. All are varnished. A Chinaman often makes one of these queerly constructed coffins for himself during his lifetime, anticipating how nice it will look after he is gone.

In some sections incense is burned over one of these coffins as long as it remains above ground. These rites are performed usually by the older son of the family, especially if the deceased is the father. Sometimes this older son goes about raising funds with which to hold a notable funeral celebration. The Chinese as a rule contribute liberally on such occasions. On the older son also devolves the duty of washing the corpse just prior to placing it in the coffin. Then, assisted by his brother, if he has any, they place the finest apparel that they can afford to purchase upon the deceased. A fan is then placed in one hand, and the work of sealing the coffin begins.

The Chinese are shrewd in some ways, and in case of the death of some one in the family of one who owes them, they will take the opportunity to attach the coffin in which the corpse rests and hold it until the debt is paid. This scheme works like a charm, for never would a son allow his relative's remains to be the property of the man he may owe. Throughout the Fukien province, in which Fuchau is situated, there is a custom of placing a piece of silver in the mouth of the deceased.

Laws throughout China make it imperative that the greatest respect be paid to the dead. These laws govern not only the actions of the Chinese at the time when an official dies, but extend even to the members of one's own family. It is said, however, that there is less occasion to enforce the laws in this particular than in any other misdemeanor prohibited by the law-books of the Celestials. Reverence for their ancestors, or that which is more properly called "ancestor worship," is almost part of the Chinaman's nature.

After the death of one of the family the aim of those who survive is to save sufficient money to give the deceased an elaborate burial. They deny themselves many things, often for a period of three years. When the day of the funeral comes, it is a truly notable one. There are processions, bands of music and the offering of sacrifices. The coffin, the ancestral tablet and the sacrifices are all borne to the grave separately.

The performance is in many respects similar to the funeral services held in San Francisco to-day in that section of the city known as Chinatown. Especially is this true in the procession, when a leading Chinaman goes ahead with strips of paper which contain many holes. These he scatters broadcast. It is the belief of the Chinese that if they can bury their dead before the evil spirit, which is following, can catch up with the body, then the deceased will have peace after death. It is further believed by them that this spirit must pass through each hole in each one of the strips of paper, and as they scatter thousands of them there are no Chinamen who are not saved if the funeral is conducted at all as it should be.

No matter if it is three years after the death of the one whom they are bearing to the grave the members of the family are expected to mourn just as much as if it were the next day after death. While the greater part of this is agonized form rather than sincere mourning, still they succeed very well in making the show.

There are practically no Chinese graveyards in China. The only cemeteries are those of American missionaries. The Chinese of the southern provinces usually select a burying-spot for the deceased off by itself, perhaps in the side of a mountain. Their graves resemble in shape somewhat a borseshoe, and are several times as large as the coffin. A dry place is selected, out of the reach of the white ants, and there a tomb is built. Sometimes these tombs are finely carved. The style of grave or tomb differs in various sections of China.—Philadelphia Record.

SOUTH AFRICAN LOCUSTS

A correspondent writes of the numerous swarms of locusts which from time to time settle on South African farms, and the method by which the farmers destroy them. The locusts cover everything, and are described as blotting out the sun in their flight till it seemed shining through an orange mist. The rush of their wings fills the air with a sound like the roaring of a storm through a pine forest, and the bodies of those which, wearied with flight, fell to the earth covered the ground like a living carpet. Seen at a little distance the main body of the swarm resembles a snow-storm, the wings diaphanous in the sunlight, drifting along before the wind or sinking slowly toward the ground. It is impossible to ride through the living mass, as the buffeting of the face and hands of the rider becomes intolerable. As seen from behind the swarm is visible for miles, trailing across the country like a big hand of smoke floating along before the breeze. When the swarm alights it destroys every green blade of vegetation, and leaves behind it a track of ruin and desolation. A method of dealing with the pests with fair effectiveness, even in the fully developed flying insect stage, has been discovered in the colony. A fungus has been found which thrives rapidly on their bodies with invariably fatal effect. The disease spreads with extraordinary rapidity, and if once a swarm is infected the whole mass of insects disappears in a few days' time. Cultures of the fungus are supplied to the farmers by the government, and when a swarm approaches a neighborhood all the farmer has to do is to ride out with a can of the material and a sprinkler of twigs, and sprinkle it here and there on the insects as they fly past him. In a few days there will be an end to that particular swarm. It is mentioned as characteristic of the mental development of the local Dutch that they refuse to have anything to do with the new method of exterminating what is one of the greatest obstacles to successful farming in South Africa. They say God created the locusts and it is sinful to destroy them.—New York Post.

THE UNIVERSAL LANGUAGE

The English language is conquering the world. One hundred and sixteen million persons now speak it, and it is spreading at a most marvelous rate. In the eleventh century only 2,150,000 spoke English. Enterprising English-speaking people are spreading all over the globe, and those who ought to know claim that it will become the universal language. The number of people who speak the principal languages of the world are:

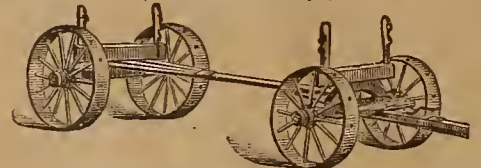
English	116,000,000
Russian	85,000,000
German	80,000,000
French	58,000,000
Spanish	44,000,000
Japanese	40,000,000
Italian	34,000,000

THE RUBY AS AN OMEN

With the Hindus of to-day the ruby is esteemed as a talisman, which is never shown willingly to friends, and is considered ominous of the worst possible fortune if it should happen to contain black spots. The ancients accredited it with the power of restraining passion, and regard it as a safeguard against lightning.—Chicago Journal.

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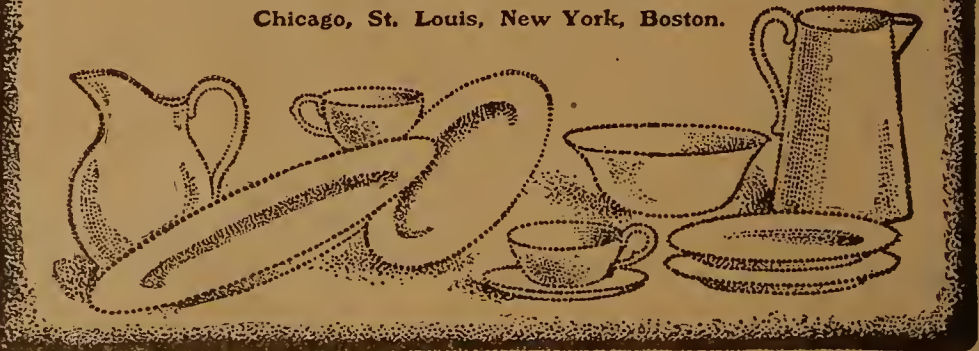
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SOMETIME

Sometime, when life's mysteries all are learned,

And suns and stars for me are set,
The things that I so blindly spurned,
O'er which I grieved with lashes wet.

Will flash before me in darkest night
As stars more brightly shiue 'mid tints of blue;

Then shall I see the plans of God were right—
That what I deemed reproof was love most true;

And shall see how, though my heart may sigh,
God's plans the better are for you and me—
How, when I called, he heeded not my cry,
Because his wisdom to the end did see.

Yea, as prudent parents may disallow
The sweets so craved by babyhood—
So what God, in love, keeps from me now
Is withheld alone for his child's own good.

And if, sometime, commingled with life's wine

I find the wormwood—rebel and shrink—
Still sure am I a wiser hand than mine
Pours out this portion for my lips to drink.

And if my own dear one be lying low—
Low, where my kisses cannot reach her face—

I must not blame the blessed Father so,
But shield my sorrow in his love and grace.

I shall sometime know not lengthened breath
Would prove the best for my dear friend,
That e'en the sable palls of voiceless death
May hold the fairest boon that love doth send.

But alas! not now. Ahide in faith, O aching heart!

God's plans, like lilies pure and white,
Unfold;

I must not tear the close-shut leaves apart;
Time will reveal the calyxes of gold.

And when I shall reach that promised land
Where the tired feet with sandals loosed
Find rest,

Then clearly shall I see and understand
The paths that God ordains are always best.
—Advocate.

HOW ONE BOY DID IT

HE CAME into the chancellor's office one day and began to talk about a course of study. He was no longer real young, being even a voter. He said frankly that he was not contented to go through life without being a scholar. He had already done hard work, and bore the evidences of it. He said, with candor, that he had no money and wanted no help; he would work his way. Later he did accept a little aid which the authorities felt that he ought to have. Through five years, one of them in the preparatory school, he toiled steadily on. Other students gave up and dropped out, but he went ahead. Every day, except Sunday, he delivered newspapers to his list of subscribers. He made himself so efficient in that line that other students found it easier to obtain paper-routes. He never whimpered or complained about his hard lot. He asked no favors in class because he had to work so hard outside. He competed for and won a few prizes in his chosen subjects, and took good rank in class and literary society. One night, after a brilliant address by a brilliant orator, the chancellor conferred a degree upon the student who had won his way to that point. The next morning he called to thank the chancellor, and among other things he said, "I thought a good many times that you might have had regard for me and might have eased up a little for my sake, but now that I have my degree I am glad you made me work so hard to get it. It will never be cheap in my eyes."

The case is not exceptional at all. Do not ask whether I have had a particular boy in mind. I surely have, and several of them. This has been done by more than one. The story is told for the average boy with ordinary means and a brave heart.—Central Advocate.

MANNERS

"Manners make the man," says the old proverb, and there never was a truer one. Good manners are the shadows of good morals, if not the morals themselves. Good manners are the result of

good sense, good nature and a little self-denial for the sake of others. A man's manners may be the making of him, but as manners are only the expression of the man it would be more proper to say the man makes the manners. Take two men of equal advantages, but let one be gentlemanly, kind and obliging, the other rude, harsh and insolent, and the one will become rich, while the other will starve. Good manners mean something more than being polite in a parlor, and bowing and scraping in a ball-room. Good manners come from the heart as much as from the head.

Unmannerly actions are among the most expensive habits of life. Bad manners are an evidence of selfishness, and selfishness may be broken up in a child if education on this line is begun early enough. Bad manners are sure to reflect back upon the parents and cause them much pain and mortification in the end, for there can be no good excuse for a lack of proper education in this respect. Bad manners is one of the faults that have prevented many otherwise smart and fairly good men from rising in life. No boy or man with bad manners is ever a welcome visitor in a friend's house or in any society. Manners is one of the earliest lessons a child should be taught, and the time to begin is before the child is a year old; and this education should be carefully enforced all through his youthful years. It is a terrible thing to handicap a child by permitting him to grow up with bad manners, and all schools and institutions should make the question of manners one of its leading features.—Advance.

THE DUTCH SABBATH

In studying the changes which the map of the world has undergone in the course of the last two hundred years it must often have seemed a puzzle why the Netherlands, with all their colonial enterprise, could never hold their own against their British and French rivals. "New Amsterdam" and the names of the Hudson river, Harlem and the Catskills still commemorate their presence in eastern North America. All Australia was once known as New Holland. Netherland colonists settled southern Africa from the Cape to the valley of the Zambesi, but with the exception of Java and a remnant of their former share of Guiana all their transmarine possessions have slipped out of their hands; the natives of their colonies as a rule preferred any other master. Yet in some points Mynheer cannot be called an illiberal biped. As a traveler he is open-handed, an indulgent skipper, and generous patron of artists and bric-a-brac dealers. Dutch heroism, in defense of national independence, twice stood the fierce ordeal of a life-and-death struggle against aggressors of portentous power. But visitors of Holland-American settlements soon realize the fact that the dogmatical conservatism of that plucky race transcends anything lingering in Scotland or Upper Canada. From Saturday midnight till Monday morning Mynheer Van Kerken's youngsters are kept under strict surveillance, to prevent the possibility of their getting a minute's fun indoors or outdoors, and United States post-office commissioners not long ago investigated the case of an old lady with a Friesland name and a suburban post-office who declined to admit letter-carriers at the end of the week to obviate the obligation of distributing their mails the next forenoon. A similar state of affairs prevails in cosmopolitan Johannesburg. Sixteenth-century by-laws are enforced without resources of appeal, and rather than run the risk of innovations the aldermen voted to disfranchise sixty thousand Uitlanders, who pay four fifths of the city taxes. Yet those same nationalists claim to represent the only wholly free portion of the Dark Continent.—Felix L. Oswald, in Lippincott's.

VICTORIA AND THE SABBATH

Queen Victoria began her illustrious reign with a strict observance of the Sabbath, and has never failed to insist upon its being honored. The effect upon the nation has been marked. On one occasion one of her ministers of state arrived at Windsor castle late on Saturday night.

"I have brought for Your Majesty's inspection," he said, "some documents of great importance; but as I shall be obliged to trouble you to examine them in detail I will not encroach on the time of Your Majesty to-night, but will request your attendance to-morrow morning."

"To-morrow is Sunday, my lord."

"True, Your Majesty, but the business of the state will not admit of delay."

The next morning the Queen and the court went to church and listened to a sermon on "The Christian Sabbath: Its Duties and Obligations," the Queen having sent the clergyman the text from which he preached. Not a word was said about the state papers during the day, but in the evening Victoria said, "To-morrow morning, my lord, at any hour you please—as early as seven if you like—we will look into those papers."

"I could not think of intruding upon Your Majesty at so early an hour," replied the minister. "Nine o'clock will be quite soon enough."—Watchword.

THE BEST-SPENT MONEY

Dr. Jordan, in the September number of "Men," strikes at the root of good citizenship by showing the relation between education and the welfare of the state in the following words: "The best political economy is the care and culture of men. The best-spent money of the present is that which is used for the future. The force which is used on the present is spent or wasted. That which is used in the future is repaid with compound interest. The foundation of a university, as Professor Howard has told us, may be an event greater in the history of the world than the foundation of a state. By its life is it justified. The state at the best exists for the men and women that compose it. Its needs can never be the noblest, its aims never the highest, because it can never rise above the present. Its limit of action is that which now is. The university stands for the future. It deals with the possibilities of men, with the strength and virtue of men which is not yet realized. Its foundation is the co-operation of the strong; its function to convert weakness into strength."

GOLDEN THOUGHTS FROM GREAT THINKERS

Put a seal upon your lips and forget what you have done. After you have been kind, after love has stolen forth into the world and done its beautiful work, go back to the shade again and say nothing about it. Love hides even from itself.

We are God's plants, God's flowers. Be sure that he will help us to unfold into something serenely fair, nobly perfect; if not in this life, then in another. If he teaches us not to be satisfied until we have finished our work he will not be satisfied till he has finished his.

Preachers of the gospel are not required to judge the living or to praise the dead. They are to judge nothing before the time. They are to speak according to the oracles of God, and their message should be uttered with clearness, with frankness, with tenderness, but without apology, without flattery, without hypocrisy.—Exchange.

"To be honest, to be kind, to earn a little, and to spend a little less; to make, upon the whole, a family happier by his presence; to renounce where that shall be necessary, and not to be embittered; to keep a few friends, but these without capitulation; above all, on the same grim conditions, to keep friends with himself; here is a task for all that a man has of fortitude and delicacy."—Stevenson.

Let us try to make our lives like songs—brave, cheery, tender and true, that shall sing themselves into other lives, and so help to lighten burdens and cares.—Exchange.

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HOUSEHOLD

(CONTINUED FROM PAGE 13)

VARIOUS HINTS

OPENING FRUIT-JARS.—I had been told that the way to open screw-topped fruit-jars was to dip them in hot water. So I dipped, and then strained and struggled in an effort to unscrew the covers, usually having to resort to the knife. This I dislike to do, for though it is usually effective, it is almost sure to injure the cap so that it will leak air the next time it is used. I now stand my jars upside down in hot water as deep as the covers, letting them stay there five minutes or more. They will unscrew easily after that in nearly every case.

SCALLOPED POTATOES.—When the winter vegetables become scarce toward spring potatoes have to be depended on more than ever. They are nice scalloped. Peel and slice them, and soak a short time in cold water. Put a layer of potatoes in the bottom of a baking-dish, then add a little onion in slices, salt, pepper, butter and a sprinkling of flour. Continue in this way till the potatoes are all used, then pour in milk till it shows among the potatoes. Bake in a moderate oven two hours or a little more. It is well to stir once in awhile, to prevent sticking to bottom and sides.

A WHEELBARROW ON WASHING-DAY.—Anything that lessens the labor of washing-day ought to be welcome. One day, as I went to hang the clothes out, I looked in vain for a place to put the basket where the bottom of it would not get muddy. Then I espied a wheelbarrow near by, and so I put the basket in that, and then wheeled it to the place where I wanted to begin operations. It saved a deal of stooping, and it could easily be moved to the place where it was wanted.

I notice there are still people who use a box or basket for their clothes-pins. This seems strange when a clothes-pin bag or apron can be so easily made. It is more convenient when worn about the neck, instead of as an apron.

A DINNER-HORN.—A conch-shell, such as one often sees kept for ornament, makes the very best kind of a dinner-horn if the pointed end is ground off to make a mouthpiece. It should be ground on the grindstone, and the rough and sharp edges smoothed down with a file. The opening should be about half an inch in diameter. It takes much less breath to blow a shell than it does to blow a reed-horn, but it takes more "knack," and there will probably be some failures before the uninitiated will be able to get a tone. The lips should be drawn tightly across the teeth, and then pressed hard against the mouthpiece. The opening between the lips should be narrow, and the breath should come strong and steadily. The tone is clear, and can be heard a long distance. The medium-sized shells usually have a more pleasing tone than do either the very large or the very small ones. When one has become used to blowing the horn, by an extra effort the tone an octave higher can be sounded. After hearing the long, clear note of a conch-shell horn the discordant bray of a reed fish-horn will seem very unpleasant.

DRY BEANS.—Objections were made when I told the number of bean-poles I wished set when the garden was planted last spring. I was told that I could not possibly eat so many beans, and that they would be wasted. But I undertook to see that every one should be saved, and so carried my point. In the fall the dry pods were carefully picked and the beans shelled and put in the cellar, where they would keep cool, as I knew, to my sorrow, that they are likely to get weevil-infested if left where it is warm. There were about three quarts of the shelled beans, and before March came I wished there had been more of them. I did not like them baked, but by soaking them over night and simmering gently two hours or so they were delicious. After the first hour salt was added, and when they were ready to go on the table the superfluous water was drained off and butter and pepper added. The result was surprising. One could

almost imagine that the beans were fresh from the garden. At next planting-time there will be no objections to a large quantity of pole-beans. These, by the way, were the old-fashioned "Horticultural" beans.

A REFRACTORY LAMP.—My "central-draft" lamp had been acting very badly. It would burn fairly well the first part of the evening, but suddenly it would begin to smoke, and it would smoke profusely. Several times I went to bed leaving it burning properly, with other members of the family reading by its light. The next morning I would find everything in the room peppered all over with fine particles of soot. I trimmed the wick carefully, and cleaned the perforated disks that are around it, then tried a better grade of oil, but all to no purpose. The smoking continued, and I was almost ready to cast aside the lamp, when one day I happened to think of the perforated diaphragm near the bottom of the "draft." It never had been taken out, to my knowledge. I pressed back the little tongues that held it in place and pried it out. It was fairly covered with dust and fine cinders, so that the passage of air must have been almost wholly checked. I washed the diaphragm in hot soapy water and dried it before replacing it. That was nearly six months ago, and the lamp has not shown any signs of smoking since. I know of two families who have discarded this kind of lamp on account of its smoking, and it is very likely that the trouble was the same that I had. The lamps are very satisfactory when they work well, and it is a pity to lose the use of them when such a little thing will make them as good as they were when new.

SUSAN BROWN ROBBINS.

THE PAN-AMERICAN CONGRESS OF BIBLE-STUDY

The Pan-American Exposition for 1901 in Buffalo is being widely advertised. The buildings are going up rapidly. The grounds, four hundred and fifty acres in extent, are beautifully situated, and all the Americas are joining in the promise to make it a great fair.

With power furnished from Niagara Falls the electrical display must be the greatest the world has yet seen.

The Buffalo Exposition Company and the Bureau of American Republics say they have a common purpose—that of stimulating trade and commerce between all American nations. Within a few days the incipient steps have been taken for an added interest to the exposition. The thought of a congress of Bible-study came to some leading men who believe thoroughly in the Bible. This thought developed action. With Dr. Blackall, the head of the Baptist Publication Society of Philadelphia, as one of the leaders, the plans are being formulated for such a congress. It is to be distinctly a Bible congress and not one to disprove the Bible; and just as distinctively it is to be undenominational.

At the initial meeting, held in the Young Men's Christian Association rooms in Buffalo, one of the most stirring speeches was made by a Jewish rabbi favoring the preparation for such a congress.

The name Sunday-school Congress would not be as suitable to the idea of the congress as Bible-study, for many claim that much is brought into Sunday-school work that is not legitimately Bible-study.

With the Bible as text-book the varied interpretations of the book will doubtless be presented by the ablest biblical scholars not only of the continent, but perhaps of the world.

While the committees and those in general charge make definite arrangements, let it be said afterward, "Great was the company of those who published it."

While the exposition company strives to stimulate trade, it will be to the honor of the whole people if they interest themselves to stimulate the study of the greatest book in the world. This book is the marvel of all litterateurs, because it comforts the poor slave and humble miner and yet ever furnishes new material for the study of the greatest minds on earth.

MARY JOSLYN SMITH.

WOMAN'S BEAUTY.

HOW IT IS MADE OR MARRED

There is nothing more subtle than woman's beauty. It eludes all attempts to analyze it. A woman may have the measurements and lines of the Medician Venus and yet lack beauty. Or she may defy artistic standards and be known everywhere as a beautiful woman. There is, however, one kind of beauty which is recognized by all and which is every woman's dower, a beauty to which the French have given the name of "The Beauty of Youth." Many a time we turn to watch some sweet, young girl, impressed by her beauty. But if we analyze the beauty we find it is made up of smooth skin, clear complexion, bright eyes, ruddy lip and rounded



contours. That beauty ought to last always. But how soon we see it fade. The young wife looks at her yellow skin, sunken cheeks and hollow eyes and marvels at her own falling off. And the younger girls still retaining the beauty of youth wonder "what her husband could have seen attractive in her," not knowing that it will be their turn to fade very soon.

HOW TO KEEP BEAUTY

In order to preserve this beauty of youth, to retain the charm of sweetness and freshness which belongs to maidenhood, the prerequisite is to understand that the chief foe of woman's beauty is womanly ill health. Young women are often very careless of themselves. The temptation of the dance or of the sleigh-ride overrules their prudence, and the result is suppression and perhaps irregularity. This is only the beginning of worse evils, and yet this alone is sufficient to steal the freshness from the face. The womanly health should be protected with the utmost care and the first symptom of derangement or disease should be met by the use of Dr. Pierce's Favorite Prescription.

"I will always recommend Dr. Pierce's Favorite Prescription, 'Golden Medical Discovery' and 'Pleasant Pellets,' for they cured me when doctors and other medicines failed," writes Mrs. Mary L. Lewis, of Tanner, Gilmer county, W. Va. "For fifteen years I suffered untold misery. When I commenced taking Dr. Pierce's medicines I had given up all hope of ever getting well. I could not lie down to sleep, and everything I ate would almost cramp me to death. Was very nervous and could hardly walk across the room. I only weighed ninety pounds when I commenced taking these medicines; I now weigh one hundred and forty pounds, and am having better health than ever before. My friends all say they can hardly believe that I am the same person; after being sick so long I have changed to be robust and rosy-cheeked. I have taken fifteen bottles of 'Prescription,' fifteen of the 'Discovery' and fifteen of the 'Pellets.' I know that if it had not been for your medicines I would not have been living to-day."

Dr. Pierce's Favorite Prescription is a woman's medicine. It is not offered as a cure-all, but it is confidently recommended as a sure and safe remedy for all those diseases of women which are

curable by the use of medicine. It establishes regularity, dries the drains which destroy the strength and beauty of women, heals inflammation and ulceration and cures female weakness. It is the best preparative for motherhood, giving great strength and elasticity to the organs of maternity, and making the baby's advent practically painless.

"GETTING YOUNG AGAIN"

It is one of the triumphs of "Favorite Prescription" that its results are so palpably and visibly real. The cure of womanly diseases by this medicine is proved by the gain in flesh and weight, by the restoration of youthful freshness, by the renewed strength and ambition, and by all the outward and visible signs of robust health.

"I enjoy good health, thanks to Dr. Pierce's Favorite Prescription and 'Golden Medical Discovery,'" writes Mrs. J. J. Schnetyster, of Pontiac, Livingston county, Ill. "Have taken six bottles of each kind. I was taken sick last February, and the doctors here called it 'grip.' I lay for four weeks in bed, and when I got up I found I had 'displacement.' Had such aches and pains in my back and limbs could not stand any length of time. I knew that our home doctor would insist the first thing on an examination, and that I would not submit to unless I was dangerously sick, and then it would be too late. If any one had told me your medicines would do me so much good I would have said, 'Oh, no, not that much good.' I can say truly I was surprised at the benefit I received. An old friend of mine said to me, 'Why, what is the matter with you, you are getting so young again?' I told her I had taken six bottles of Dr. Pierce's medicine, and that if she would do likewise she would feel ten years younger, too."

There is one clause in Mrs. Schnetyster's letter which voices the sentiments of thousands of sensitive women. "I knew that our home doctor would insist the first thing on an examination, and that I would not submit to unless I was dangerously sick, and then it would be too late to do any good."

Many a woman in just such a case, realizing the danger she runs yet neglects medical treatment because she shrinks from the indelicate questionings, the offensive examinations and obnoxious local treatments which the home physician often thinks necessary.

A WAY OUT

of this difficulty is opened for women by Dr. Pierce's invitation to consult him by letter, free. All correspondence is held as strictly confidential, and the written confidences of women are guarded by the same professional privacy observed by Dr. Pierce in personal consultations with women at the Invalid's Hotel and Surgical Institute, Buffalo, N. Y. Address Dr. R. V. Pierce, Buffalo, N. Y.

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A. L. Amend, of Newfield, El Paso county, Col., says, "We have studied the Medical Advisor thoroughly, and when anything is the matter with any of our large family the first thing we do is to see what the book says."

Dr. Pierce's Common Sense Medical Advisor, containing 1,008 large pages and over 700 illustrations, is sent free on receipt of stamps to pay expense of mailing only. Send 31 one-cent stamps for the cloth-bound volume, or only 21 stamps for the book in paper covers. Address Dr. R. V. Pierce, Buffalo, N. Y.

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FARM SELECTIONS

AN EXPERIENCE IN LAND-DRAINAGE

DURING a visit to the country recently a very prosperous farmer related to us the following experience. He said:

"I owe a great deal to the underdrainage of my land. My father's family numbered five children—three sons and two daughters. At the death of our parents, which occurred within six months of each other, our father dying first, I was the oldest, and it was my father's request, made a short time before his death, that I should administer on the estate, which I did. The death of our mother occurring so soon after that of our father it became necessary that the entire estate be settled and the land sold or divided among the heirs.

"My father owned one hundred and sixty acres, upon which he had settled in his early manhood, and the greater part of which he had cleared and had brought into cultivation. The soil was not rich, to begin with, and thirty or forty years of cropping without giving any special attention to keeping up or increasing the fertility resulted in a poor crop yield. For many years before his death it required very close economy on his part to make 'ends meet,' as the saying goes.

"All of the children were married and settled in life, some on small tracts of land acquired through their husbands or wives. I had a little home of fifty acres, which came in most part through my wife's inheritance. One of my sisters and one brother were renters, with a fair show of personal property. Each of my brothers and sisters was industrious and economizing. We were all, in a general sense, limited in our means. Neither one of us thought ourselves able to buy the old homestead, as much as we loved it. We tried to sell it, but could get no satisfactory offer. We talked about dividing it, but found that it was hardly possible to do it and give satisfaction to all concerned.

"The farm had a poor reputation, and hardly any one who was able would consider the purchase of it. To rent it would only add to the further impoverishment of the place—a run-down rental farm would be more difficult to sell. For more than a year we kept trying to dispose of it in some way, but could not. At last my brothers and sisters insisted that I should buy it; they proposed to make the terms so easy that I could pay for it with a little effort. To do this I sold my home place, and with an heir's part in the old homestead I bought it, agreeing to pay the other heirs one thousand dollars each on long time. I had left me out of the sale of my little home about one thousand dollars and some live stock.

"After moving onto my father's old farm and fixing up things a little I made a careful survey of the land; took an account of stock, so to speak. Much of the land was level, with a very close soil, easily packed and unproductive.

"I determined to rely on three things to succeed. The three things were underdraining, manure and clover.

"I spent nearly all my money in underdraining, to start with. Some of my neighbors entreated me not to risk it, but I said to myself if I can't drain my land and improve it so I can grow corn, wheat and clover I will give it up. I began on a low, level field that had not made a yield of twenty-five bushels of corn an acre for ten years at least, to my knowledge, and so far as I remember never had more than thirty-five bushels when the seasons were very favorable. I determined to tackle this field first, and did so, doing a pretty thorough job of drainage, and the change in the soil after two or three years was most remarkable. Mark you, I had known this field from boyhood; it was always loggy or heavy and sad and remarkably cloddy. After being underdrained it was easy to break, mellow and fine. The change was so apparent that it was a delight to work it. I spread all the manure I could get upon it, and turned under a crop of clover the second year. The yield of corn, wheat and clover was so heavy that it was a wonder to myself and my neighbors. I went on with the drainage, taking one

field after another, until I have completed the work. Besides my labor I have invested over two thousand dollars in underdrains. By doing so I have grown large crops and have paid the four thousand dollars, with interest, due my brothers and sisters, and have built necessary outbuildings, and have a balance in bank in my favor.

"The farm now has a good reputation and the owner is free from debt.

"I could not have done all this if I had set down on the farm and trusted to luck. Drainage did not do all, but it was the foundation-stone. It made the manures and green crops turned under available, it lessened the labor of production, and more than doubled the yield in some instances. After underdraining the land I could count on the certainty of a good crop every season, and make my calculations and work up to them."

Mr. Osman was so delighted over his success that we ventured to ask him a few questions, and we give them a place, together with his answers, as follows:

"Did you plan the entire work of drainage before you began it?"

"Yes; I took the levels of the land in a crude way, and determined where the outlets should be, and then began at the outlets for each system."

"How deep did you dig the drains?"

"An average of three feet; in some places as deep as four feet, to get through by the straightest line."

"Do you find that the deepest drains work quite as well as the shallow ones?"

"Better, I think. If I had the work to do over I would increase the depth rather than make it less, and I would use larger tile."

"Why use larger tile?"

"Many of my tile were three-inch; I would not use less than four-inch tile, for the reason I think larger sizes of tile would give a better circulation of air through the under soil."

"Did you have any open drains?"

"Yes, at first; but I have put them underground, for the reason that I found them inconvenient in the fields in plowing and in the use of machinery; besides, they harbor the growth of weeds, bushes and briars, and have to be cleaned out frequently. Now I have nothing in the way."—The Drainage Journal.

FODDER-CORN

In his excellent articles written for the FARM AND FIRESIDE Mr. Grundy has advised farmers to plant sweet-corn as a summer feed for cows during the period when pastures are short. Taking kindly to his advice, I have planted from one to two acres every season during the past four years, and find it the best-paying crop I have on the farm. We generally have a prolonged dry spell the latter part of July and the first part of August. This season it extended through August and until the tenth of September, and most of the pastures burned up; consequently, the cows failed. By throwing over a liberal amount of sweet-corn twice a day I kept my cows to the full flow of milk, and had the satisfaction of selling butter to my neighbors at good prices. I consider the piece I had in corn worth twenty-five dollars an acre, which is more than I could have realized from any grain crop. I induced a neighbor to plant an acre, and he says he found it of especial value for early feed for hogs, as it comes earlier than field-corn.

Farmers in this section of Iowa are beginning to see their way through the fodder problem. A shredder was first introduced in this locality last season, and was so successful that a great many will have their fodder shredded this fall and winter. W. E. CHALFON.

APPLE CROP

The shortage of good apples this year will call attention to some little-known sections of New York state. For example, in the southern tier of counties, Sullivan, and on west, there are many good apples this year. Buyers seldom go there, because apple-growing is a side issue in farming, and the buyers like to go where it is the chief business. This year it will pay them to get off their regular routes and hunt up new fields.—Rural New-Yorker.

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Marble is entirely out of date. Granite soon gets moss-grown, discolored, requires constant expense and care, and eventually crumbles back to Mother Earth. Besides, it is very expensive. **White Bronze** is strictly everlasting. It cannot crumble with the action of frost. Moss growth is an impossibility. It is more artistic than any stone. Then why not investigate it? It has been adopted for nearly one hundred public monuments. We have designs from \$4.00 to \$4,000.00. Write at once for free designs and information. It puts you under no obligation. We deal direct and deliver everywhere.

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FREE SIX EXQUISITE, COSTLY FINGER RINGS

WE TRUST AGENTS with 20 Mineral Lamp Wicks. Best Wick in the World, Light Equal to Gas. No Smoke. No Smell. No Trimming, No Broken Chimneys. Can be sold in an hour or two at 5 cents each. When sold send us the money, \$1.00, and we give you free any two of these Solid Gold laid rings. The Stone Set Rings are equal in appearance to costly Diamonds. The Band Rings are elegant in design and all are warranted to wear well and give satisfaction. We take back unsold goods. No cash wanted until wicks are sold. Write to MINERAL WICK CO., Providence, R. I.

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LASTS A LIFETIME

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FREE TO AGENTS—Complete outfit for big-paying business. All profits clear, as we prepay charges. The rush is on, so come quick. **FARM AND FIRESIDE, Springfield, Ohio.**



FARM SELECTIONS

INFLUENZA OF CATTLE AND SHEEP

For the past few months a disease has been prevalent among cattle and sheep that for the want of a better name or more accurate term has been called influenza. How widely distributed or how prevalent the disease may be has not been ascertained. Only a small per cent of the animals in a community have been attacked, but the mortality among those infected has been very high.

The symptoms of the disease differ considerably, depending upon the organs affected, whether it be the respiratory, the digestive, the circulatory or the nervous systems.

The owner seldom recognizes the onset of the disease. The first thing noticed is that the animal refuses to eat or drink or that the appetite is very irregular; but as the general appearance is bright the thought of serious disease is not entertained, a recovery being expected in a few days. A close examination at the time will show a much-quickened, harder pulse, with increased respiration. The respiratory sounds are dry and rasping. In the early stage there is little or no discharge, but there is later. Pneumonia is likely to develop. If the bowels are involved there will be diarrhea and the discharges streaked with blood. The apparent constipation often present is due to not eating. If the coverings of the brain be affected the animal will appear bright and the eye prominent and clear until great nervousness develops. If the kidneys are affected the urine will be bloody. In some cases the skin on the extremities cracks and a serum exudes, which gives the appearance of eczema. The respiratory system is most often affected, and the digestive tract least often. Some cases die quickly, but the majority become weak and bloodless and hang on for two or three weeks. In sheep we have much the same symptoms, but with more nasal discharge, dropsy and swelling of the throat. The animals become stiff and weak and linger for several days.

A post-mortem shows redness of the nasal cavity, of the trachea and bronchi, and often solid patches in the lungs. There will be effusion about the heart, and the membrane surrounding it will be thickened. There may be inflammation of the intestines. There will be considerable diminution of the quantity of the blood, so that all parts will be pale. We cannot recommend a line of treatment, but would advise consulting the local veterinarian early.

We desire to learn of the distribution of the disease, and would appreciate receiving information of the occurrence of the disease over the state.—A. W. Bitting, D.V.M., in Bulletin of Indiana Experiment Station.

NEW CLASS OF FARMERS

During the past few years a new class of farmers has rapidly appeared. They are city men who have bought farms and started in to develop them as they would a manufacturing or commercial business. Some of these men were born in the country; others have for years desired a country home. They want to make even a hobby self-supporting. They can put up the money to buy the land, stock and tools, but they say that they cannot get the brains. They can find four capable managers of a factory where they can find one for a farm. That is the story we hear again and again. What does it mean? Are these men too exacting? Do they ask too much of their "farmer," or is the trouble with the latter? There are two sides to the question, but the fact remains that some of these jobs offer a fine opportunity for a man who knows how to run a farm. There is need of a class of men specially trained for this work. The agricultural colleges ought to fill this want.—Rural New-Yorker.

THE MOUNTAIN ROSE has joined Crawford's Early and Crawford's Late in the list of special favorites with market-peach growers.

ONE YEAR'S FREE TRIAL

WE WILL SHIP ANY CORNISH AMERICAN PIANO OR ORGAN UPON THE DISTINCT UNDERSTANDING THAT IF NOT FOUND ENTIRELY SATISFACTORY AFTER 12 MONTHS' USE, WE WILL TAKE IT BACK, thus giving you one year's free trial in your own home and a cash bonus besides.

You take no risk when you buy on the celebrated **Cornish Plan**. It is the only way. Arguments and claims are worthless in the face of this guarantee. If as good pianos and organs could be bought anywhere else for as little money, we could not afford to make an offer like this, but we'll go further. In proof of this statement which may to some appear extravagant, we give to every purchaser a guarantee that is practically a bond secured on the whole of our plant and property worth **OVER ONE MILLION DOLLARS**, warranting each instrument sold to be exactly as represented. Furthermore the **Cornish American Pianos and Organs** are far better in quality and general appearance than ninety-nine per cent. of the instruments offered for sale by any other firm of piano and organ manufacturers, or any agents and dealers, for twice the amount of money we ask.



You cannot afford to buy any but a Cornish American Piano or Organ in face of this guarantee, as you save half by purchasing from the only firm of actual manufacturers of high grade Pianos and Organs that sells exclusively to the general public at first cost.

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Horse-Powers Combined
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No Increase in Prices.
Send for New 1900 Catalogue showing full line of **FEED-MILLS, HORSE-POWERS, SAWING-MACHINES AND JACKS**
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A new discovery, odorless and tasteless, that ladies can give in coffee or any kind of food, quickly curing the patient without his knowledge. Any one can have a free trial package by addressing **Fogers Drug & Chemical Co., 1250 Fifth and Race Streets, Cincinnati, Ohio**, and easily drive foul tobacco-smoke and dirty spittoons from the home.



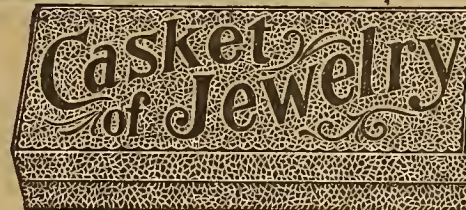
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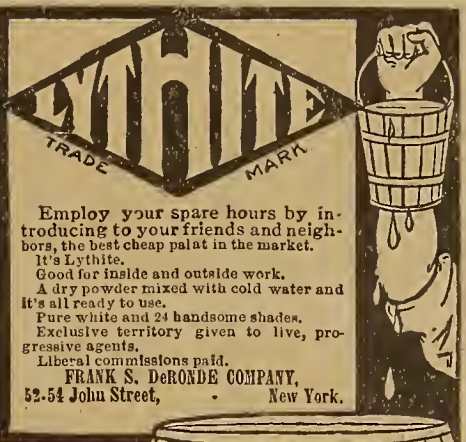
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4 Buggy wheels with tire on, \$7.25. With Axles Welded and Set, 11.00. I make all sizes and grades with Steel or Rubber Tire. Send for catalogue giving prices on wheels 2 1/2 to 4 in. Tread with instructions for ordering.
Portland Sleighs, \$17.50. Bob Sleds, \$16.50. Special Grade Wheels for repair work, 5.50
Freight prepaid. if you write to-day. **W. F. BOOB, Centre Hall, Pa.**

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Jewel Casket
of Prevention Tablets, The Great Cold Remedy and Headache Cure. Once! If you agree to sell only eight boxes at 25 cents a box, write to-day, and we will send you the tablets by mail postpaid. When sold send us the money, \$2.00, and we will send you this beautiful premium, exactly as described same day money is received. If you do not sell all of the tablets, we will send you two pieces of jewelry for each box sold. This is a grand opportunity to get a charming assortment of elegant jewelry for a very little work. Write to-day to **NATIONAL MEDICINE CO., Lock Box 17 L, 4010 Chapel Street, New Haven, Conn.**



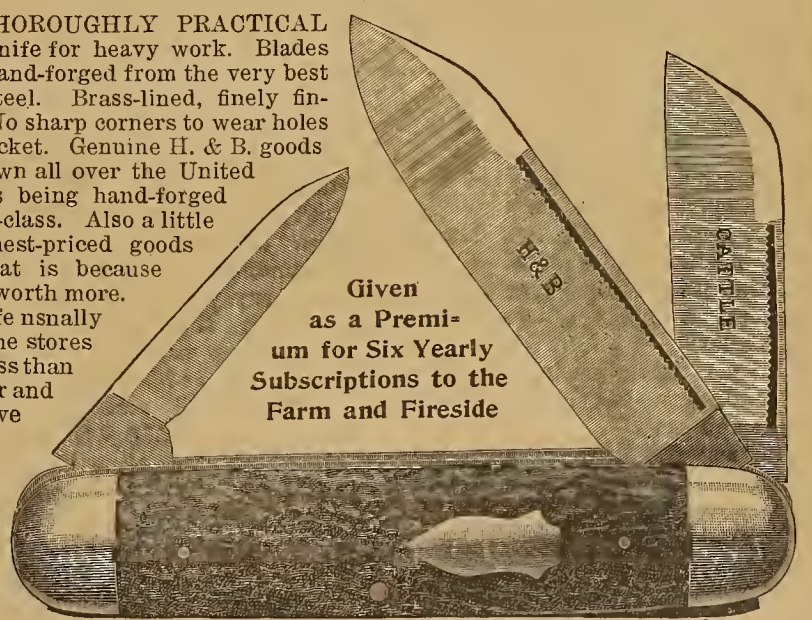
FREE This beautiful Jewel Casket is silk lined, has a hinged cover and contains all of the following pieces of jewelry: Gold Watch Chain and Charm, Bracelet and Locket, 4 Scarf Pins, (Diamond, Turquoise, Ruby, Emerald), Genuine Electric Diamond Ring, Plain Gold Ring, Pair Cuff Buttons, 5 Stick Pins, (Fly, Butterfly, Horse-shoe, Marlowe, 3 Hearts), Enamelled Brooch, Trilby Heart, Emerald Belt Pin and 3 Beauty Pins. This jewelry is fine gold plated, and the stones are exquisite imitations of the precious gems they represent. You can get this beautiful Jewel Casket with the twenty-two pieces of fine jewelry absolutely free for selling only eight boxes of our Ounce Cures Cold in One Day! Relieves Headache at Once! If you agree to sell only eight boxes at 25 cents a box, write to-day, and we will send you the tablets by mail postpaid. When sold send us the money, \$2.00, and we will send you this beautiful premium, exactly as described same day money is received. If you do not sell all of the tablets, we will send you two pieces of jewelry for each box sold. This is a grand opportunity to get a charming assortment of elegant jewelry for a very little work. Write to-day to **NATIONAL MEDICINE CO., Lock Box 17 L, 4010 Chapel Street, New Haven, Conn.**

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2 & 3 PLY.
TRADE MARK
Can be applied by any one on steep or flat roofs.
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If you are going to build, or have leaky shingle or tin roofs, SEND FOR SAMPLE AND CIRCULAR.
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A THOROUGHLY PRACTICAL knife for heavy work. Blades hand-forged from the very best steel. Brass-lined, finely finished. No sharp corners to wear holes in the pocket. Genuine H. & B. goods well known all over the United States as being hand-forged and high-class. Also a little the highest-priced goods made—that is because they are worth more. This knife usually sells in the stores for not less than one dollar and twenty-five cents.

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We Will Send the Farm and Fireside One Year and This Knife for . . . \$1.25

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AGENTS WANTED IN EVERY city, town or village to work under appointment of the Woman's Home Companion as circulators. No special experience required. No investment. Not only is the necessary equipment sent free and fully prepaid, but the newly prepared and detailed instructions are so unusual complete and practical as in special manner to safeguard the work and assure success. Spare time can be utilized with great profit, or it may be followed as a regular business. Convancing, Local and General Agents of either sex will receive paid by any first-class illustrated magazine in America, on the just principle of full pay for finished work. Discarding contingent offers, large commission in cash immediately. Renewals same as new subscribers. Circulators will have every aid and facility at command of the publishers. Fall and winter being the seasons for best success, all who seek pleasant and profitable employment should write at once for particulars. Address **THE WOMAN'S HOME COMPANION, Department of Agents, Springfield, Ohio.**



SELECTIONS

LARGEST THINGS IN THE WORLD

THE largest locomotive-works in the world are in Philadelphia.

The largest car-manufacturing shop in the world is in Pittsburg.

The largest drug-house in the world is in St. Louis.

The largest wholesale dry-goods house in the world is in New York.

The largest gun-works in the world are in Essen.

The largest tobacco-factory is in St. Louis.

The largest drop-hammer in the world is the property of the Bethlehem Iron Company.

The largest bottling-manufacture is in Pittsburg.

The largest spring-works are in Pittsburg.

The largest bank is in London.

The largest church is in Rome.

The largest beef and pork packing house is in Chicago.

The largest starch business is in Oswego.

The largest copper-mine is in Michigan.

The largest pumping-engine in the world is in the Calumet and Hecla mine.

The largest match-factory in the world is at Barberton, Ohio. Its capacity is one hundred million a day.

The greatest railroad in the world is in the United States.

The greatest hotel is in New York.

The greatest marble-quarry is in Vermont.

The greatest flour-mill is in Minneapolis.

The greatest copper and brass mill is in Waterbury.

The greatest stove-factory is in Detroit.

The greatest whisky industry is in the United States, the output being more than eighty million gallons a year.

The largest sewing-machine works in the world are at Elizabethport.

The largest boot and shoe industry is at Lynn.

The largest grocery-house in the world is in New York.

The largest hardware-house in the world is in St. Louis.

The largest state is Texas.

The largest financier in the world is in New York.

The largest broker is in New York.

The largest stock-exchange is in New York.

The largest city (in area) is New York.

The largest life-insurance companies are in New York.

The largest buildings are in New York.

The largest corporation in the world is in Pennsylvania—the Carnegie Steel Company, capital stock two hundred and fifty million dollars. Next comes the Federal Steel Company, of New Jersey, capital authorized two hundred million dollars.

The largest monument in the world is in Washington—largest in the sense of height and cost.

The loftiest structure in the world is in Paris—the Eiffel tower.

The largest steamboat runs in Long Island sound between New York and Fall river.

The largest steamship plies between New York, Southampton and Bremen.

The largest locomotive is on a short line in Pittsburg.

The largest college or university is Harvard, considering the greatest number of students. Its undergraduates exceed in number those of Oxford.

The greatest ship-building plant in the world is at Glasgow.

The largest suspension-bridge in the world is in New York.

The largest metal spans in the world are in New York (the Washington bridge).

The largest public gardens are in Paris.

The largest number of theaters is in London.

The largest hospital in the world is in Paris—the Hotel des Invalides.

The largest stone structure is in Egypt.

The largest falls are in New York.
The largest river is in South America.
—New York Press.

LONG-LIVED FOLKS

Because one's parents and grandparents lived to be nearly one hundred does not make it certain that their descendants will do likewise, for the inheritance of vitality may all be dissipated in twenty years of high living. A small stock of vital force well taken care of may last twice as long.

People who are long-lived all have certain physical traits that are not noticeable. In the first place they have straight backs. The majority of folks have curvature of the spine in some degree; unnoticeable it may be, but it is there. The man who will live to be old has a straight back, holds his head up, and has a broad, deep chest. This means that the vital organs are not crowded and perform their functions unimpeded.

Usually with long-lived folks the trunk is long and the legs short in proportion. The habit of deep, slow breathing also belongs to this section of the human race. A calm nature is necessary, too, for a person always in a flutter, either with rage or joy, wears himself out. Easy motions and a light step, with muscular relaxation, are other characteristics.

Those who live long are always small eaters. The enormous task the liver and stomach of a gourmand have daily is too much for any system.—Selected.

THE SEVEN WONDERS OF THE WORLD

Of the original "seven wonders of the world" none now remains except the Great Pyramid of Egypt. The tomb of Mausolus, king of Caria, built about 350 B.C., was destroyed before 1400 A.D. The third wonder, the temple of Diana at Ephesus, was built 552 B.C., and was destroyed 356 B.C. The fourth wonder, the walls and terraces of Babylon, were erected about 570 B.C.; they decayed gradually, after Babylon had ceased to be the capital of the Assyrian empire. The Colossus of Rhodes, erected in 224 B.C., stood sixty-four years, was destroyed by an earthquake, and lay in ruins for nearly nine hundred years, until a Jew bought it and took it on nine hundred camels to Alexandria. The statue of Zeus, at Olympus, was made 437-433 B.C., was removed to Constantinople, and was destroyed by fire 475 A.D. The Pharos, at Alexandria, was built about 283 B.C., and was destroyed by an earthquake about 1300-1400 A.D.

"HOW DO YOU DO?"

The Germans say, "Wie befinden sie sich?" (How do you find yourself?) or "Wie gehts?" (How goes it?); the Dutch, "Hoe vaart gij?" (How do you fare?); the Italians, "Come state?" (How do you stand?); the French, "Comment vous portez-vous?" (How do you carry yourself?). In Spain, as in Germany, the usual greetings are, "Como esta usted?" (How are you?) or "Que tal va?" (How goes it?). The Greeks say, "Ti kamete?" (What do you do?), while in China the expression is, "Have you eaten your rice?" in Russia, "Be well!" or "How do you live on?" and in Arabia, "May your morning be good!" or "God grant thee his favors!" The Turk's greeting is, "Be under the care of God," and that of the Persians, "Is thy exalted condition good? May thy shadow never be less!" The briefest and at the same time most expressive salutation is the North American Indian's "How!"

THE SUMMER-BOARDER BUSINESS

According to the latest statistics from New Hampshire there were no less than 174,280 summer boarders from outside the state entertained there last season, of whom 58,222 are reported as remaining one week or longer, 95,706 transient guests remaining less than one week, and 20,352 guests occupying cottages. The cash income from the business is given as \$4,947,935, exclusive of the guests' outside expenses. It will thus be seen that the summer-boarder business is still one of New Hampshire's leading industries.

A GREAT OPPORTUNITY—NOT A MATTER OF CHANCE

\$17,500 in Prizes

EVERY WOMAN HAS AN OPPORTUNITY TO WIN
A LARGE PRIZE. THERE ARE NO BLANKS.

THE DELINEATOR, the Magazine of Fashion well known for a generation, celebrates the dawn of the new century—the year 1901—by offering 1901 prizes ranging from \$500 to \$5.00 to 1901 women. Total of prizes, \$17,500.

Prizes will be awarded, not to those sending the largest number of subscriptions to THE DELINEATOR, but to those sending the largest number in proportion to the population of each town in which they are secured. The woman living in the smallest town has just as good a chance to win a large prize as the woman living in a city.

To this end all towns and cities in the United States and Canada are divided into seven classes, according to population:

CLASS ONE Includes all cities of 200,000 inhabitants or over. In this class there are 28 prizes to be given away, the highest being \$500, the lowest \$5.00.

CLASS TWO Includes all cities from 50,000 to 200,000 inhabitants. In this class there are 133 prizes to be given away, the highest being \$400, the lowest \$5.00.

CLASS THREE Includes all cities from 30,000 to 50,000 inhabitants. In this class there are 208 prizes to be given away, the highest being \$350, the lowest \$5.00.

CLASS FOUR Includes all cities from 10,000 to 30,000 inhabitants. In this class there are 257 prizes to be given away, the highest being \$300, the lowest \$5.00.

CLASS FIVE Includes all towns from 5,000 to 10,000 inhabitants. In this class there are 307 prizes to be given away, the highest being \$200, the lowest \$5.00.

CLASS SIX Includes all towns from 1,000 to 5,000 inhabitants. In this class there are 367 prizes to be given away, the highest being \$150, the lowest \$5.00.

CLASS SEVEN Includes towns of 1,000 inhabitants and under. In this class there are 601 prizes to be given away, the highest being \$100, the lowest \$5.00.

AN ILLUSTRATION A woman taking subscriptions in a city of 25,000 population would be in Class 4. She would compete with others sending subscriptions from towns of 10,000 population up to 30,000. She would have an opportunity of winning one of 257 prizes, which might be as high as \$300 and could not be less than \$5. She would win a larger prize if she sent in twenty subscriptions than would a woman who forwarded twenty from a town of 30,000, because her proportion of subscriptions to population would be larger. This being the case, some very small lists will win some very large prizes. In one of our recent prize offers, a woman in Washington, D.C., won a prize of \$25 for securing only 14 subscriptions.

NO CONDITIONS The same woman can win several prizes in every class by taking subscriptions in different towns. The contest begins with this announcement and will terminate February 15th, 1901. Providing the first order contains two or more subscriptions, they will be accepted at 90 cents each. Subscriptions can be sent afterward at the 90-cent rate until February 15th, 1901. The regular price of The Delineator is \$1.00 a year. Subscriptions must begin with November or December of 1900, or January, February or March of 1901.

PROFITS FOR ALL Every woman who fails to win one of the above prizes, but who sends subscriptions at the proportion of one to every two hundred inhabitants of a town, will be paid a special prize of ten cents on each subscription secured, in addition to the ten cents allowed above.

WHY DO WE LIMIT THIS OFFER TO WOMEN? Because The Delineator is published for women, and women can best recommend it to women. It is a great favorite among them. There are now more than four hundred and eighty thousand subscribers. If you are not interested in this offer, call the attention of your friends to it.

ALL women in sending their first order of two or more subscriptions must mention that they are to apply upon the above offer; complete information regarding prizes, with order blanks will be sent. To those who are not thoroughly acquainted with the merits of THE DELINEATOR, full information will be sent upon request. Address,

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No starving. No sickness. We will mail
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THE ONLY PERFECT VAGINAL SYRINGE
Its principle of action—that of INJECTION and
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A Natural Black for the
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Send name and address no money, and we will mail you
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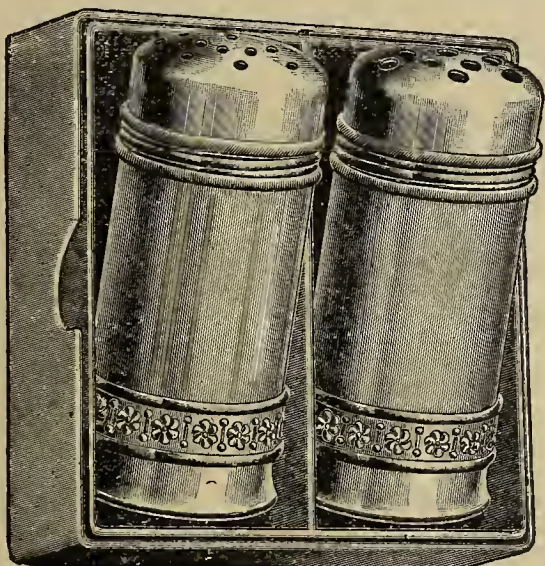
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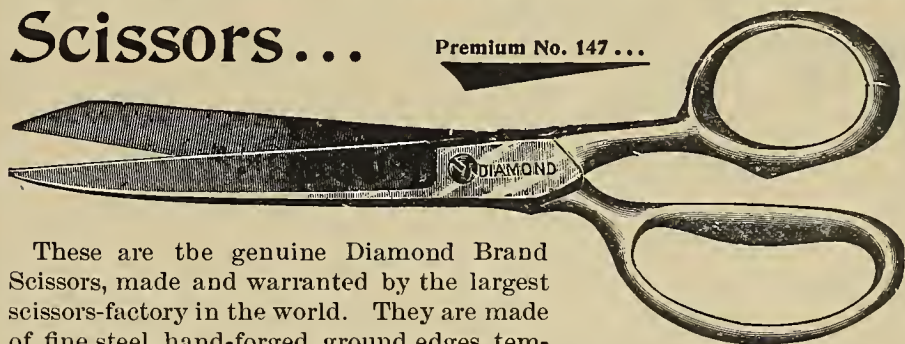
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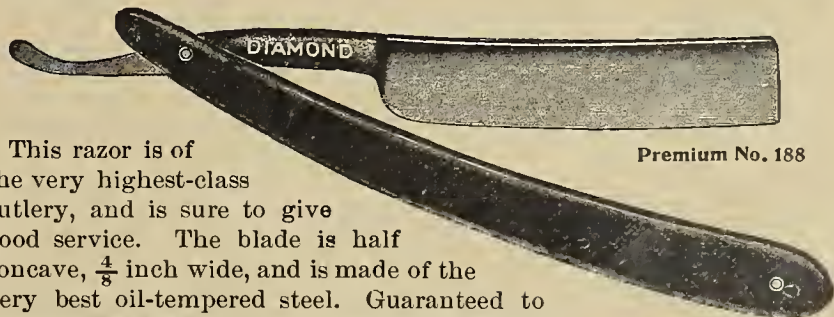
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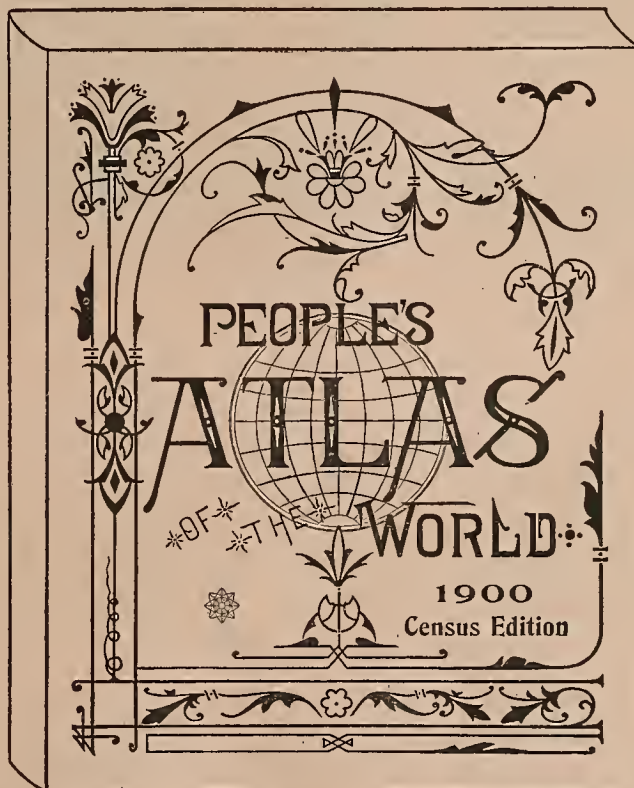
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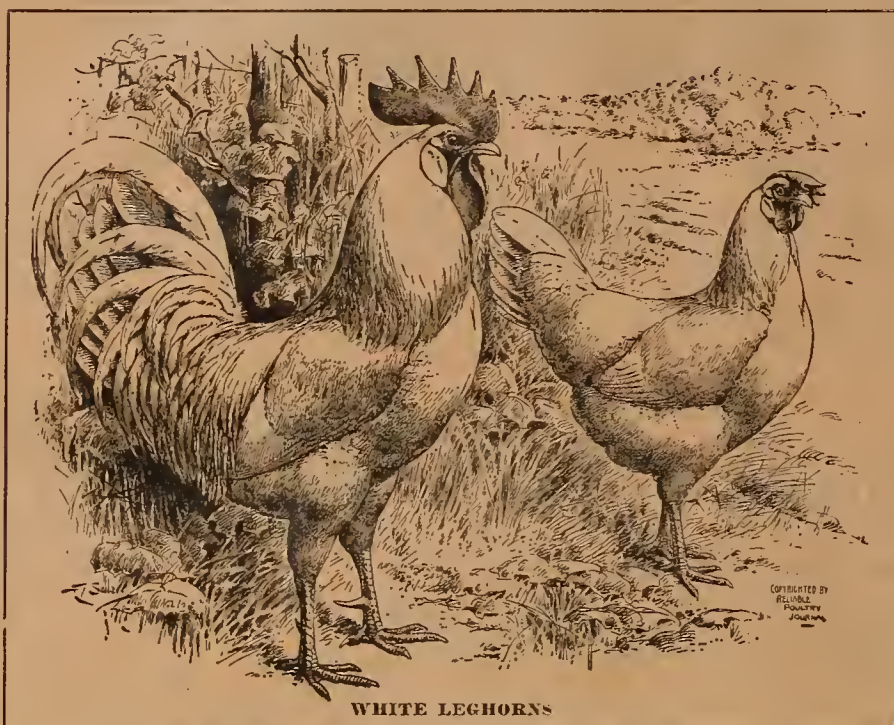
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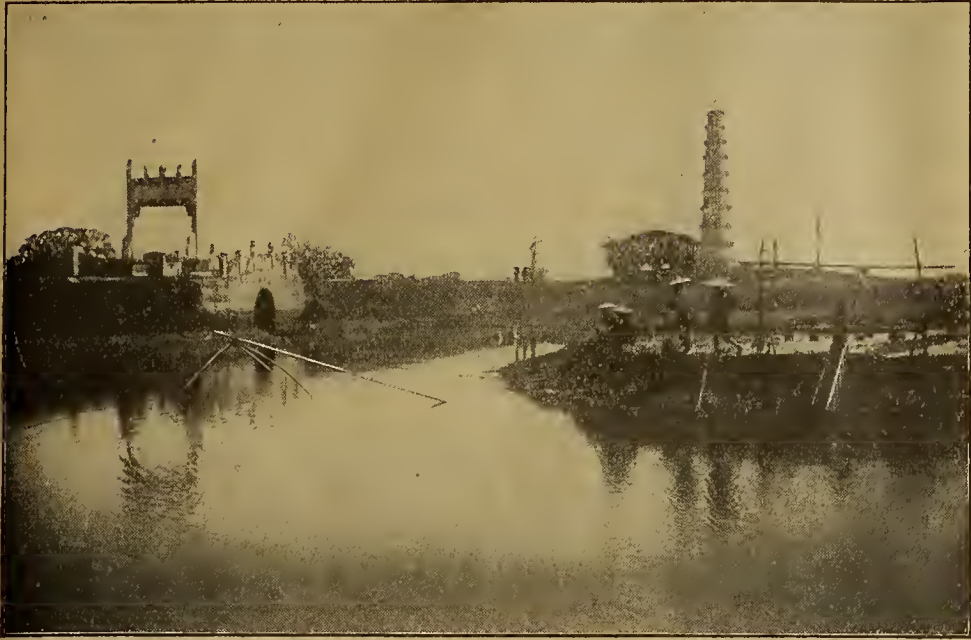
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SCENE NEAR SHANGHAI, CHINA—NINE-STORIED PAGODA—FARMER FISHERMEN

CHINESE AGRICULTURE

CAN AMERICA COMPETE WITH IT IN THE CHINESE MARKET?

By William N. Brewster

THE American farmer of to-day is vitally concerned with the question of the opening of the Chinese Empire. America's power of producing food-stuffs is so much in excess of her capacity for their consumption that without a great foreign market the farmer's crops are a drug on his hands. It is not crop failures that he dreads so much as low prices. The local prices are regulated largely by the foreign demand. The home consumer must pay enough for his bread to keep it from being shipped across the sea. Many ill-informed people think that China can never become a large consumer of the American farm products, because labor is much cheaper in the Far East, and because the people are mostly very poor. It is true that wages for farm-hands in China are about five cents a day at ordinary times, and ten cents in planting and harvest seasons. But even at such rates the American employer is better off than his Chinese competitor. The American with his horses and machines will accomplish from ten to fifty times as much as the Celestial with hands and grass-hook. In all other respects the advantage is even more overwhelmingly in favor of the Western producer. He has more land, and it is much cheaper. Good rice-land in South China brings three hundred dollars an acre. It produces three crops, but even then it represents one hundred dollars capital for each crop. Then if the Chinese farmer is forced to borrow money for seed and fertilizer, as he often is, he must pay twenty-four per cent for it. What a load that would be for the American debtor to carry! The cultivation of their fields twelve months in the year is so exhausting to the soil that fertilizers must be used very extensively. This demand keeps the prices of fertilizers high. The country that has been cultivated in this way for centuries cannot possibly compete with the virgin soil of the great American plains.

But can these poor Asiatics afford to buy American food? They cannot afford to buy large quantities of tinned meats, Quaker oats, sugar-cured hams, or prepared food for infants. But the cost of such preparations is largely in their manufacture, not in the raw materials. It is a fact that a hearty American bread-eater will not consume more than five or six dollars' worth of flour in a whole year. It is our civilization that costs us so much to live. "The necessities of life we can do without, but the luxuries we must have." Not so with the of-the-earth-earthy Mongolian. "Nature abhors a vacuum;" and to human nature no vacuum is so abhorrent as when located in the stomach. The almond-eyed Celestial wants to be filled. He does not care for the trimmings. He appreciates Emerson's

"plain living," though not his "high thinking," which the sage of Concord thought ought to go along with it. The Chinese raise wheat in great quantities, and consume it all. It is of poor quality and very badly milled. Their flour is a dirty, musty, brown stuff. It makes excellent paste. The Pacific coast is shipping flour to China now by the steamer-load. It is for sale on the street in the towns and cities of South China. It is no longer necessary for foreigners living in the interior to send to the nearest open port for their flour. The prices of the lower grades range but little above the native article, and the quality is evidently so much superior that it sells readily. Moreover, the prices of cereals in China are steadily advancing. During the past four years the increase amounts to at least fifty per cent. This is not due to failure of crops, and it is universally conceded that it is not likely there will be a return to the former figures. On the contrary, prices will probably continue to advance, as they have in Japan.

In this connection there is quite an important point which seems to have been generally overlooked by writers upon Chinese commercial affairs. The

Chinese government has for many years prohibited the exportation of rice. This artificially lowers the price of the chief staple food of the people. So that rice here in Hinghua now, though considered very high by the natives, sells for less than half the American quotations. Thus, embargo on rice tends to lower the price of every article of food. It also keeps down wages. Lift this prohibition upon export and the Chinese would have to pay the world's market rates in order to keep their rice at home. Wages would of necessity double and even treble in a short time. Then the American farmer would find China his best foreign customer. All this will surely come to pass with the opening of this vast empire. When the rich mineral deposits are worked, and the proposed railroads begin to operate, this abnormal condition cannot long continue. It may be at present premature, but the government at Washington might well begin to consider how the "open door" may be made to swing both ways. The door should be open for products of China to go out, as well as for foreign goods to enter. This would not only greatly improve the market for American wheat, but the cotton-planter would find prices going up. What has been said about the advantages of the American wheat-grower over the Chinese applies equally to the cotton-raiser. Cotton has been grown in Central and South China for centuries. But it is of the poorest quality. They do not know how to improve their seed. Scientific plant-breeding is of course unknown. The fiber is very short, and the cotton is dirty and uneven. As cotton cloth is worn universally by the four hundred million Chinese, it goes without saying that the best future foreign market for this great American staple is China. The quantity of American cotton goods now shipped to the Orient is enormous, and is increasing by leaps and bounds. It is likely to continue to grow for at least a generation to come.

But there is one question still unanswered that is often asked by thoughtful people, in opposition to the view that China is destined to become a good customer of the American farmer. The balance of trade has been steadily against

[CONCLUDED ON PAGE 8]



CHINESE FARMERS TRANSPLANTING RICE IN A SUBMERGED DISTRICT



AN EIGHT-STORIED PAGODA ON THE BANKS OF THE PEARL RIVER, NEAR CANTON, CHINA, EIGHT HUNDRED YEARS OLD. Dedicated to "Feng-shui," literally wind and water. A complicated system of geometric superstition by which the good luck of sites and buildings is determined. "Feng-Shui" is also supposed to control the rice districts, and he is much revered by the farmers

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IN A recent address before the Washington Convention for Social Study Dr. L. G. Powers, chief statistician of the census, said:

"The present census when completed will unquestionably show that the visible material wealth in this country now has a value of ninety billion dollars. This is an addition since 1890 of twenty-five billion dollars. This sum added to our national wealth in the last decade, as you all know, is the savings of our people in that period. They were the savings of a people who were better fed, clothed and housed than any equal number of human beings in any other land or time, and yet it is a saving greater than all the people of the Western continent had been able to make from the discovery of Columbus to the breaking out of the Civil War. It is a saving which represents more houses and buildings, more furniture in the home, more implements and machinery to assist man in his work, more and better means of communication, more good clothes, good books and personal adornment than the entire race had saved during all the countless ages of struggle from Adam to the declaration of our American independence.

"The last century witnessed in our country an enormous application of steam, water and horse power in the performance of human work, which, with our improved machinery, enable the eight million workers of American farms to produce as much and as valuable material for food and clothes as the four hundred million people in China, or all the inhabitants of Europe, outside of Russia. Our steam-driven factory machinery enables one man to prepare as many yards of cloth as one hundred in the Orient. As a result our people produce all the food that they consume, and enough to feed many millions in Europe and Asia. Our looms and forges turn out finished cloth and machinery and other products sufficient for our own use and to enable us to send vast quantities to sell in the markets of the globe.

"Our statesmen are not perplexed over the problem how to produce enough to keep the multitude from dying, but how to find a market for our surplus products. This is a problem which presents many enigmas to even the best mind and the stoutest heart. The social problem, so far as it relates to wealth, is vastly different in our day and land from what it was in the past. The difference marks a beneficent movement in society, the most marvelous in the history of the race. Turn where we will, we meet some phase of the problem of the distribution of wealth—the special problem of the nineteenth and the twentieth centuries. The so-called labor problem is one of the most prominent of those phases. It is largely a question of how labor and capital shall wisely and equitably divide the wealth which they jointly create. The same problem is involved in other forms in our political and economic dissension on the standard of money, free trade and protection, the regulation of transportation charges, and countless other topics of public interest. Further, the cure of our moral ills is co-ordinated with the economic questions of wealth, creation and distribution.

"The distribution of wealth among the masses of the people lags, and will continue to lag until they are taught fully to appreciate and desire the things which are represented by their proportionate share of that wealth; and that education is what we call the normal part or aspect of this problem. How shall the people be trained to produce more and better things, and how educated to use and consume greater quantities of the same?"

THE fall season last year was considered a phenomenal one in regard to conditions favoring the Hessian fly. The preventive measure of sowing the wheat after a certain date in each latitude of the winter-wheat belt was not a success. The period during which the fly deposits its eggs was prolonged about ten days later than the usual safe time for sowing wheat.

The fall season this year in some respects duplicated that of last year, and reports from all parts of the winter-wheat belt, from Ohio to Kansas, show that the growing wheat is more widely infested than last year. In other respects, however, conditions have favored the growth of wheat, and it is much better prepared for winter than it was at the corresponding time last year.

COMMENTING on America's savings the New York "Sun" says:

"The United States are to-day the richest, both actually and potentially, of all the countries in the world. Not alone is our supply of actual money per capita greater than that of any other nation, but our undeveloped resources are undoubtedly the largest and most valuable on the globe. The commercial history of the last decade has proved that we are virtually independent of the rest of the world as regards the supply of raw materials, while in the same period we have shown ourselves so expert in manufacturing that we can supply other countries with the products of mills and factories at an enormous advantage as compared with any one of them. In the years to come there is no reason to doubt that our country will be the largest exporter both of raw materials and of manufactures that the sun shines upon.

"To this happy end not alone our natural resources have contributed, but the inventive character of our people, and, above all, their thrift. We are as great to save as we are to trade. The history of our savings-banks, an institution peculiar to this country, is one of constantly increasing deposits. These deposits have increased nearly \$500,000,000 in the last four years alone. The savings-banks' deposits in the one state of New York are over one billion dollars, accredited to over two million depositors. And, finally, Dr. L. G. Powers, the chief statistician of the Census Bureau, in an address just delivered in Washington, declares that the present census will show that our people have saved in the last ten years the astound-

ing sum of \$25,000,000,000—twenty-five billion dollars. The actual visible wealth of the country now amounts to \$90,000,000,000.

"The savings of these last ten years, so Statistician Powers estimates, represent more houses and buildings, more good clothes, good books and all sorts of necessities and luxuries than the entire human race had saved from the time of Adam to our declaration of independence."

PRESIDENT McKINLEY'S Thanksgiving proclamation for 1900 reads as follows:

"It has pleased Almighty God to bring our nation in safety and honor through another year. The works of religion and charity have everywhere been manifest. Our country, through all its extent, has been blessed with abundant harvests. Labor and the great industries of the people have prospered beyond all precedent. Our commerce has spread over the world. Our power and influence in the cause of freedom and enlightenment have extended over distant seas and lands. The lives of our official representatives and many of our people in China have been marvelously preserved. We have been generally exempt from pestilence and other great calamities; and even the tragic visitation which overwhelmed the city of Galveston made evident the sentiments of sympathy and Christian charity by virtue of which we are one united people.

"Now, therefore, I, William McKinley, President of the United States, do hereby appoint and set apart Thursday, the twenty-ninth of November next, to be observed by all the people of the United States, at home or abroad, as a day of thanksgiving and praise to Him who holds the nation in the hollow of his hand. I recommend that they gather in their several places of worship and devoutly give Him thanks for the prosperity wherewith he has endowed us, for seed-time and harvest, for the valor, devotion and humanity of our armies and navies, and for all his benefits to us as individuals and as a nation; and that they humbly pray for the continuance of His divine favor, for concord and amity with other nations, and for righteousness and peace in all our ways. In witness whereof I have hereunto set my hand and caused the seal of the United States to be affixed. Done at the city of Washington, this twenty-ninth day of October, in the year of our Lord one thousand nine hundred, and of the independence of the United States the one hundred and twenty-fifth."

REVIEWING the foreign commerce of the United States a recent Washington press dispatch says:

"The manufacturers of the United States are rapidly increasing their share in the foreign commerce of the country. Nearly one half of the importations are now for their use, and more than one third of the exportations are their products. Their importations during the nine months ending with September amounted to \$281,000,000, a daily average of over \$1,000,000, while their exports of finished manufactures in the same time amounted to \$338,000,000, a daily average of over \$1,250,000.

"Never before in the history of the country have the manufacturers imported so much material for use in manufacturing, or exported so much of finished manufactures.

"In the corresponding nine months of last year the importations of manufacturers' materials amounted to \$242,000,000, or \$40,000,000 less than in the nine months recently ended, and the exports of manufactures amounted to \$277,000,000, or \$60,000,000 less than in the corresponding months of this year.

"During the past four years the manufacturers have increased their importation of materials for use in manufacturing more than fifty per cent, and their exportation of finished manufactures more than eighty per cent. Manufacturers' materials a decade ago formed but thirty-three per cent of the total importations; now they form over forty-five per cent. Finished manufac-

tures, which a decade ago formed but eighteen per cent of the exports, now form over thirty-three per cent."

IN AN interview with the London correspondent of the New York "Tribune" Mr. W. J. Chalmers, whose firm has manufacturing plants both in England and Chicago, says:

"It is a delicate matter for me, with a board of directors in England and in the United States, to discuss the relative ability of the two countries in matters of commercial activity. Yet the fact remains that the United States is carrying off the great bulk of the trade, not only in South Africa, but in the foreign markets of the world. It is true we have a large plant in England, and from nine hundred to one thousand employees for the manufacture of mining machinery, while our Chicago shops employ an equal number. We are now engaged here and in Chicago in manufacturing some of the deepest mining machinery for South African mines, with large orders. However, my observation in England and other parts of Europe has not been confined to our own affairs. There is no doubt the United States to-day is not only prepared to compete in the markets of the world, but is doing it successfully, and will continue to do so till England and the rest of Europe are prepared to invest sufficient capital to make an Andrew Carnegie possible here. The beauty of Mr. Carnegie and many other American manufacturers is that they are pursuing a purely commercial policy, contrasted with a stock-jobbing policy.

"The question in Mr. Carnegie's mind—and I employ that as illustrative of scores of other American manufacturers—is, 'What is the lowest price I can produce a certain article for, and what price can I obtain for it?' Thus, in the duller times they are preparing for good times, and when the industrial harvest-time comes the United States is prepared to sell steel, coal, steel-plates, electrical and mining machinery and machine-tools lower than the rest of the world. The English steel manufacturers now proclaim the fact that if steel comes down to twenty-two dollars a ton they will make it at a loss. The United States, however, is making steel at twenty-two dollars a ton and selling it at a profit. I was at a great tool-works in Berlin the other day where all the machine-tools came from the United States. They had just put up a new steel-constructed foundry five hundred by one hundred and twenty feet, all the material for which was sent to Berlin from the United States within ninety days from the date of the contract, as against six months, the quickest European bid, and at fifteen per cent less cost. In every shop in Germany nine tenths of the machine-tools used were made in the United States."

SPEAKING of the Cuban Constitutional Convention the Chicago "Times-Herald" says:

"The United States has too much blood and treasure invested in the redemption of the island from Spanish misrule and oppression not to regard Cuba's future government with the deepest solicitude, not to say misgivings. Under the fostering care of the United States the reconstruction and regeneration of the island has proceeded with amazing rapidity. Two years of American rule have almost effaced the terrible devastation of the long war and the more ruinous effects of the methods of suppression adopted by Governor-General Weyler.

"The pacification of the island has been effected by the War Department, and so far as the internal affairs of the island, which affect only its inhabitants, are concerned we could end our occupancy to-morrow. But in regard to the great sanitary work for the island which has been carried on under our military rule we have some right to exact pledges that it shall not relapse into the cesspool of filth and infection that for a century has sent forth yellow fever to ravage our seaboard cities. This was one of the festering sores of Spanish rule in Cuba, whose deadly poison was not confined to the unfortunate islanders."



ABOUT RURAL AFFAIRS

Beet-sugar and Sugar-beets

We do not hear quite so much about making sugar from beets

as we did a few years ago. The sugar prices at the present time surely seem to be high enough, while ordinary soil products have not advanced in prices in the same proportion. If the industry of making sugar from beets is ever to come upon a firm footing the present conditions seem to be most favorable for it, even without state or federal help in the way of bounties. Now, why this lull in the proceedings? Can't the men who have engineered the job of putting up factories and making contracts with farmers for beets make the business a financially successful one? What is the truth about it, anyway?

Beet-pulp for Cows

It is only in a few places, of course, that sugar-beet pulp is avail-

able as a food for cows; but wherever it is, farmers may well utilize it to the best advantage. I have always thought highly of this substance for the purpose. The Cornell University Experiment Station has just issued a bulletin on "Sugar-beet Pulp" (written by Henry H. Wing and Leroy Anderson). It contains the following conclusions: "The cows as a rule ate beet-pulp readily, and consumed from fifty to one hundred pounds a day, according to size, in addition to the usual feed of eight pounds of grain and six to twelve pounds of hay.

"The dry matter in beet-pulp proved to be of equal value, pound for pound, with the dry matter in corn silage.

"The milk-producing value of beet-pulp as it comes from the beet-sugar factory is about one half that of corn silage.

"Beet-pulp is especially valuable as a succulent food, and where no other such food is obtainable it may prove of greater comparative value than is given above."

If I could get beet-pulp I hardly think I would care to grow beets or other roots for cow food. As I cannot, I must rely only on roots grown or gathered for the purpose; and I always store up everything in that line that will answer the purpose. First of all are the mangels, grown expressly for stock food. Next come the overgrown beets that were left in the patches where grown for the table and market, and I have this year a great quantity of them. Then we have carrots, mostly from patches where they were planted for market, old kohlrabi, etc. All these vegetables, with a lot of pumpkins and squashes, and parsnips to be gathered from the field in spring, will come handy to give to our cows a change and a succulent food during the times when their ration otherwise consists wholly of dry food.

Growing Fence-posts

A few months ago I mentioned in these columns the poplar as a possible profitable crop to be grown for paper-making. I notice in one of my papers somebody's suggestion of planting Osage orange for fence-posts. His attention had been called to this matter by noticing how soon an Osage-orange hedge would grow into trees large enough for fence-posts, and an acre in this timber would in a few years furnish fence-posts of the very best kind for a large farm. Then as soon as a tree is cut down sprouts would spring up, and the best one of these could be saved to grow into posts for the next crop. It is estimated that an acre could produce no less than five thousand posts, worth when six to eight years old about fifteen cents apiece, or \$750 an acre. I have had no personal experience with Osage orange. However, the matter looks plausible enough, even more so than our figuring on the outcome of raising ginseng or Belgian hares. I have had to buy cedar posts, however, and for real good ones was charged twenty-two cents apiece. Un-

doubtedly there will be a good market for all first-class posts produced.

Osage orange is easily raised from seed sown in spring. Professor Bailey (Nursery Book) advises to soak the seed in warm water a few days before sowing. It may be planted in rows about as far apart as corn, and rather thickly in the row, so that there will be a seed every six or eight inches. Thinning must be attended to in good time. Give the same cultivation as you would corn. I wonder if there are any among our readers who have ever grown fence-posts for profit. I would like to hear from them. I have had some experience in cutting down chestnut woods and seeing the young sprouts come up and grow to good post size. How about growing cedars for the same purpose?

Hedges and Wind-breaks

I have just received a copy of a new book on "Hedges and Wind-breaks, Shelters and Live Fences," by E. P. Powell. The author is well known to the readers of FARM AND FIRESIDE, and always an interesting and instructive writer. I am not very much in favor of live fences for the division of lots on our farms. Indeed, I am rather opposed to the useless farm fences of all sorts. Mr. Powell, in the introduction to his work, says: "Live fences are of much less importance in the United States since the very general passage of stock laws and their nearly universal enforcement. We no longer have to build fences against all the world, but only to see that our own stock commits no trespass. For this purpose wire will be chosen generally where there are ranches or large pastures, while lumber sections will still use board fences."

The author tells us that the uses to which a hedge may be put are (1) as fence, (2) ornament, (3) wind-break, (4) to equalize moisture and temperature, and (5) to furnish bird food. This last point, Mr. Powell thinks, may possibly be the most practical and important question that he could lay before his readers. It is a point on which I intend to touch more at length later on. In the meantime I will state that Mr. Powell is not in sympathy with the stiff, trimmed hedges one sometimes finds as division-fences of large farms. The whole drift of his ideas and suggestions is in the direction of making home beautiful and attractive. He has noticed the reversal of the tide of population into congested city life. "The tide townward, which has gone on since the steam age began, about 1835 to 1840, and with increasing volume up to 1890, has at last begun to ebb. The tendency to move outward has already taken up nearly every deserted farm, and is buying up all available land within one hundred miles or more of the larger cities. The rise of electricity as the world's motive power has made this possible. Steam-power never could serve the farmer as it has served the manufacturer. It has built great factories, and around factories grew our great towns. Steam took our best brains and our best hands away from the farm. It took our most interesting employments out of our home-life to do the knitting, sewing, soap-making spinning, weaving, candle-making and shoe-making in vast establishments by machinery. The farmer was left to do as well as he could what coarse things were left for him to do by hand-power and animal-power. Electricity is bound to reverse all this. Steam was concentrating; electricity is distributive. You can carry steam only an eighth of a mile with profit; electricity you can carry hundreds of miles. The twentieth century will open with a vastly increasing country population, all bound together with telephones and trolley-roads. A large share of

business will be done by telephone. Merchants will sit in their houses one hundred miles from their stores, yet within speaking distance of their employees. Coming out to breathe pure air and enjoy green fields, the tide will bring wealth and culture and refinement."

We all have witnessed these changes; yet wonderful as they are, they have come so gradually that we had hardly come to a full realization of their grandeur and importance. Surely it is a welcome change which Mr. Powell has thus described. It will mean a large increase in well-to-do, beautiful country homes, more ornamental planting, etc. "The small contribution of a few rods of wind-breaks or hedges or a clump of shelter may seem an insignificant item; but these taken in the aggregate of tens of thousands will do more than large forest plantations and reservations to equalize temperature and water precipitation. Whoever builds a beautiful home and surrounds it with judicious planting of trees is a public benefactor." I may not be quite so sanguine about some of these points as Mr. Powell, but surely his book on hedges is interesting and suggestive.

T. GREINER.

SALIENT FARM NOTES

Cheap Poultry-house A few weeks ago I noticed a neighbor hauling home a load of lumber. He had on his wagon a lot of barn-siding and two-by-four and four-by-four dimension stuff. I asked him what he was going to do with it, and he said it was for a chicken-house. His wife had importuned him so long for one that he had decided to put up a twenty-four-foot building for her, and have done with it. He said he didn't mind buying boards, but the dimension stuff for frames cost so much that building nowadays is almost beyond the means of the ordinary farmer. I informed him that I never used any frame in putting up a small building, because none is needed. After explaining my methods to him he took the dimension stuff back. He said that if he had known how to build small buildings without a frame ten years ago the knowledge would have saved him enough in lumber bills to pay the whole cost of six or eight chicken and pig houses. Instead of building one large poultry-house, as originally planned, he followed my advice and erected two small ones, with a shed between them, and the whole cost was less than the one building would have amounted to, while they were fifty per cent better for the purpose, and his wife is very much pleased with them.

The two houses I advised him to substitute for the one he had planned are each ten feet wide by twelve feet long, eight feet high in front and six feet at the back, the front facing south. They are connected by a shed the same height and width, with the front boarded down from the top three feet, and wire netting thence to the ground. There are three doors, one at each end of the first house and one in the second house opening into the shed. There is a window twenty-four inches square in the front of each house. Perches are at the back, eighteen inches above the floor, and hinged to the wall, so they can be raised when the house is cleaned out. Nests are along the front wall. The floor is earth and is raised four inches above the surrounding level.

The advantages of a pair of houses like these are: They will accommodate more fowls than one house a third larger than both. The fowls can be separated, if desired, those being fattened for market given the shed and one house, and those to be held given the other house and outdoor range. During cold, rainy or snowy weather they can all be confined to the houses and shed and be fed among litter thrown into the shed. This will give them sufficient exercise to keep them out of mischief and at the same time keep them dry and prevent colds, roup and rheumatism. In case of extremely cold weather all can be confined to one of the houses at night, and the heat generated by them will keep the room

warm enough to prevent frosting of the combs and the wattles.

In constructing these frameless poultry-houses I proceed as follows: Lay two six-inch fence-boards the length of one side of the proposed building on a level spot of ground, and then lay the barn-siding on them. The upper edge of the top fence-board is placed about one inch below the ends of the barn-siding. The lower board is six inches above the opposite ends. In making the eight-foot front of the building it is a good idea to put a four-inch fence-board midway between the other two. It will stiffen and strengthen the side very much. See that the siding is laid evenly and squarely on the fence-boards, then nail them so. Turn the side over and clinch the nails. The lower side is put together in the same manner, except that the upper edge of the top fence-board is raised half an inch above the ends of the siding. Make ends in the same manner, having the upper edge of the top fence-boards exactly flush with the tops of end boards, and two inches shorter at each end than width of building; then when the building is raised the corner will fit snugly and make a tight joint. Leave out two boards from the ends for the doors. When the sides and ends are ready raise the building and nail together. It is a good idea to put a piece two inches square and about three feet long inside each corner and nail each way. This strengthens the building much, and should always be done if the building is to be used for a hog-house. Nail on a roof of barn-siding, paint it, and then batten the cracks or cover with good roofing-paper. The latter is best for a poultry-house. It is best to put a six-inch fence-board edgewise under the roof, to prevent sagging. Nail the ends to blocks attached to ends of building, and place a small post midway between the ends, setting its foot on a flat stone or something similar. This small post will not be in the way. If used for a hog-house I would set a good post firmly in the ground, to hold up the center of a building this size.

These frameless buildings are much cheaper than the frame buildings usually constructed, will last quite as long, and are strong enough for all practical purposes. In building poultry-houses the main thing is to make them wind and rain proof. Houses that admit either wind or rain are prolific causes of diseases that are difficult to cure. Ventilation can be managed well enough by means of the doors. If there is danger of chicken-thieves, the first, or outside, door may be locked. The other two are protected by the wire netting. Staple it on securely, so it cannot be pulled off, and not one in a hundred will attempt to cut through it. A pair of houses the size of those described will accommodate one hundred to one hundred and fifty fowls that have the range of the farm, while from fifty to seventy-five can be nicely wintered in them, even if they are snow-bound the greater part of the time. Farmers who keep more than seventy-five fowls over winter should have two pairs of these poultry-houses.

Winter Eggs

Many farmers do not get an egg in winter. I well remember the time we thought it necessary to "put down" in salt a supply of eggs for winter use. For about fifteen years we have had all the fresh eggs during the winter that we needed, and some to sell. It is simply a matter of care and feeding after one gets fowls of good quality. The farmer who will provide good quarters for his fowls, see that they are provided with water, crushed oyster-shell and grit, that they are kept under cover during rainy, snowy and bitter cold weather, that they have plenty of litter to scratch among, that they are supplied with plenty of oats and wheat-bran dry, a little corn, and a small quantity of some sort of vegetables occasionally, should receive all the eggs needed in his kitchen the winter long. Don't keep too many fowls together, and don't forget to give them as good attention as you give the horses. They will pay for all they receive. FRED GRUNDY.



And let these altars, wreathed with flowers
And piled with fruits, awake again
Thanksgivings for the golden hours,
The early and the latter rain.

—Whittier.

FARM THEORY AND PRACTICE

PROFITS FOR STOCKMEN.—In this country farming is not in a satisfactory condition when the price of live stock is not good. Not only is much land adapted only to grazing, but the mass of soil products must be consumed upon the farm to keep the markets from being glutted. If they can be marketed on the farm to animals that can be fed with profit there is a measure of prosperity for all. The demand for meat called for the use of all our surplus corn last year, and the present crop promises to give good returns. Then, too, the feeding of crops upon the farm is the only safe plan for very many farmers. The soil can be kept up by other means, but it would not be in possibly a majority of instances. The country that feeds largely has the surest means of maintaining soil fertility. The strength of the soil is kept on the farm.

CONCERNING FARM MANURES.—While the fertility is kept in large measure upon the farm, and a degree of security is experienced thereby, it is interesting to calculate what percentage of this fertility actually gets back to cultivated fields upon the farms of a neighborhood, and in many cases the owner of a farm would be alarmed if he knew and realized how slender a reed he leans upon when he refers to his practice of keeping the strength of his soil on the farm. Some calculation would show to many that not one fourth of this plant-food is returned to ground that produces their plowed crops. It is business to figure on this, and to stop leaks or else supply fertility in some other way.

A HILLSIDE BARN-YARD.—Up on the mountain-side I have seen the rich manure from a herd of dairy-cows, fed on Western bran and gluten-meal, thrown out of windows behind the cows upon steeply sloping ground. There it lay in piles, leaching and losing all the best soluble matter. The fertility in it may have remained upon the farm because the farm was large and the creek was far away, but it did not go upon the land that needed it, nor in such manner that it would benefit much land to any extent. It was sheer waste. The man was buying the strength of Western land and bringing it to his farm, but he was not giving that strength to his soil. It was an extreme case, possibly, but the manure that goes down between the cracks of the old-fashioned stable floor, or is leached in piles in the field, is about as wastefully managed. All over this country there are stock-farms that do not return to plowed fields one third of the plant-food removed by the crops fed upon the farm.

THE STABLE FLOOR.—The cement floor is a manure-saver, but nine farmers out of ten do not have them yet and are not ready to put them in. In such cases heavy bedding should be resorted to if the plank floor is not absolutely water-tight. On most farms bedding can be had in abundance. The absorbing material has value of its own as it rots, and it saves the voidings of the animals, which contain about three fourths of all the soil fertility that the feed took from the land. Bedding means comfort for the stock and life for the soil.

THE MANURE-SHED.—Where the number of live stock is not large it is not feasible to draw manure as fast as made to the field; but there is no need of leaching it under the eaves of the stable. When long manure is rotted in a basin other manure may be spread over it without much loss, but a shed

for stall manure is safest. Such a shed need not cost much money, and with a tight clay floor it soon earns all the cost. I spread the manure on such a floor, and it is tramped each day by stock, which prevents heating. The secret of keeping manure from heating is to exclude the air. It can then be drawn to the field whenever needed.

APPLYING MANURE.—In a five-years' rotation of corn, oats, wheat and grass two years, it is a common practice to spread all manure upon grass-land in the fall, to be turned under for corn the next season. The plan works well when cattle-feeding is a prominent feature of the farming, but does not give the most from a small supply of manure. With limited supply the corn cannot be grown with the manure without robbery of other crops, and the aim should be to make the manure secure heavy catches of clover and timothy. It should make the sod, and the sod should make the corn. To secure this the manure does best as a top dressing for the wheat-land that is to be seeded down. In no other way does a small amount of manure make so big a show as when used to fertilize wheat and the young grass in the stubble. When supplies are small the function of manure is to make a manurial crop grow or to secure a heavy sod for plowing down.

A RICH SOIL FOR TRUCK.—The more expensive a crop is in its production the richer the soil should be made, as a rule. It is a too common practice to starve some fields of the farm while giving other fields all the manure; but the garden and truck patch should be made rich in any event. A crop rotation that includes clover is all right for garden-plots, as recommended by some, when it is feasible, but practically it rarely works out. The suitable ground near the home may be in a limited amount, or chickens at large may veto such a plan. Manure is the chief source of fertility for these patches that furnish so much of the food for the family. A heavy coat of coarse manure spread in the fall and plowed under three or four inches deep, and then turned again in the spring, helps to give life to an old soil. For all except early-planted land a winter coat of rye is beneficial. Crimson clover is better where climate favors. For top dressing in the spring well-rotted manure is needed. One of the best checks to damage by insect pests in our truck-patches is an abundance of soil fertility. Coarse manures rotted in the soil during fall and winter, rotted manure for top dressing and some commercial fertilizer insure returns from the garden in very unfavorable seasons. We can afford to keep such land fertile, even at the expense of the grain-fields.

DAVID.

2

THE KIND OF MARKET-GARDENING THAT IS PROFITABLE

After quite a long experience in fruit and vegetable growing I am satisfied there is a kind of gardening that pays and a kind that does not pay. I know of no other business in which the inexperienced are more likely to fail. Especially is this true when one is obliged to sell in a market where there is much competition. The markets now are generally well supplied, and only that which is of the best quality brings a price that is remunerative to the grower. To grow fruits and vegetables of the best quality requires skill. All depends on the manner in which the work is done. One may work the whole year—as I have found by experience—and get no returns for his labor. The gardener must acquire a reputation of having the best goods, and so long as he maintains this reputation his success is assured.

The above has been proved by my experience this season. One of my main money crops is celery. This I grow by a method very similar to the one which has been called the "newest celery culture." The celery was planted on very rich ground, in rows, with alternate spaces between them of twelve and eighteen inches. After the celery had grown a few inches high a mulch of manure was placed in the eighteen-inch

space, and the blanching-boards were set up when the celery was about one foot high, so that the rows that were twelve inches apart were between the boards, thus boarding two rows together, but keeping the boards apart, so they would not cover the plants until they had grown above the boards, which were about eighteen inches wide. The field of celery was irrigated by pouring the water on the mulch of manure between the rows with the hose. The plants on a part of the field have grown more than three feet high, and some of them with roots on weighed eight pounds.

I grow the White Plume and Golden Self-blanching by this method, and the large, well-balanced bunches sell very readily for fifty to sixty cents a dozen. My salesman, who goes on the road for me, tells me that there is no competition on such goods, and the price is not questioned.

Because of lack of help to do the work a small portion of the field was not mulched and irrigated, and the season being very dry the celery made so small a growth that it was hardly marketable at any price. The only difference in the culture was in the mulching and irrigation. This cost about thirty-five dollars an acre, and by expending this additional amount a field of celery was made to pay a good profit that would not have paid the expense of growing without the mulching and irrigation.

Strawberries are another one of my money crops. By planting the varieties



Celery nearly three feet high, grown by the method described and retailing at sixty cents a dozen stalks

that are the most marketable and the best adapted to my soil on rich land, giving them good cultivation, and keeping the runners cut, so as to keep them in narrow rows—about sixteen inches wide—then early in the winter applying a thick mulch of strawy manure, and in the spring raking a portion of it off the plants, so as to leave a thick mulch between the rows, to retain the moisture during the drought that will probably come during the summer. I grow a profitable crop. To grow a crop of inferior berries requires a certain amount of labor; to grow the large, handsome berries that always sell for a price that pays the owner for growing them costs a few dollars more an acre for manure, and a few days more work in cultivation, but the expenditure of these will probably make the difference between success and failure.

Cauliflowers I have always found in good demand and at remunerative prices. The market is not generally overstocked, because few people undertake to grow them for market, thinking their culture is too difficult. I have found nothing very difficult in their culture. I give them almost the same treatment as cabbages, except when the plants are about half grown I place a mulch of manure between the rows, and then irrigate them in the same way as the celery, and this generally insures the crop. If a drought should come when the plants are heading the crop would be uncertain, but the mulching and irrigation prevent their suffering for lack of moisture at this time and make the crop a profitable one.

While some of the other fruits and vegetables may be more easily grown than those I have mentioned, yet the same principles apply in the culture of all. First is needed suitable garden soil, and this should be of a loamy nature, free from stones and other obstructions. This must be well drained and filled with the kind of plant-food the crops need; then with the right selection of varieties well planted, and at the right time good cultivation, and the use of the mulch, to retain moisture in times of drought, on some crops, and if possible supplementing the rainfall by irrigation when needed, then having a good equipment of tools, and you are in the way to success.

W. H. JENKINS.

3

LATE POTATOES

An old gardener was passing through my late potato-fields last season at digging-time; he noticed the large piles of fine, smooth potatoes, and said that he must learn how I cultivated them, for he had been a gardener for twenty-five years and during that time he had never seen such a fine turnout of late potatoes.

For the benefit of others I will explain how to obtain fine late potatoes. First, you must have good ground—an old clover-field is best for this purpose. Next in importance is sound seed. What I mean by sound seed is seed that has been kept unsprouted. This is a very important point in potato culture. The farmer usually stores his seed-potatoes in the cellar, and removes sprouts from them every few weeks. This is highly injurious to the seed, for with the removal of these sprouts the strength of the potato is exhausted, making them almost worthless for seed for late planting. Now, if we would have fine success with late potatoes we must adopt a plan to keep our seed free from these exhausting sprouts. There is one way that we can keep potatoes entirely free from sprouts. By storing the seed for late planting in cold storage we will be able to keep them in a perfect state. This plan has proven to be an invaluable one wherever known.

The potatoes should be put into tight, dry barrels and sent to cold storage late in the fall and kept there until planting-time.

S. E. B.

2

BIRDS

In reply to an article that was published in the FARM AND FIRESIDE for October 15th, headed "Our Friends, the Birds," I wish to say there is but one way to increase the numbers of our little friends; that is, to place a bounty on the head of the "king-bird." There is where the trouble is. The "king-bird" lives on other birds' eggs and young birds; yes, I have seen two or three king-birds attack and kill a full-grown robin in midair when she was trying to defend her young. The robins, swallows and yellowbirds are the greatest sufferers from their depredations, and all go down alike before the king-bird. I know whereof I speak, for I have made it a study for years. If we can protect their young the birds will take care of themselves. Of course, it would be very pleasant to have the birds with us all winter, and, as Mr. Powell says, we ought to do all in our power to feed and protect them in cold weather, but I think they would go South just the same when it got cold weather. I have hunted and killed many king-birds in the past few years. They are all over the country; at any rate, they are plentiful from Vermont to the Missouri River. One can hear the screech and twitter of the murderers, and poor old "red-breast" has to skulk for her life.

S. E. HODGES.

NOTES FROM GARDEN AND FIELD

A COMBINATION CROP.—What a most satisfactory crop a good yield of strawberries is! I never fail to get full value received for use of land and my outlay in labor, even if I give it the sole occupancy of the land for one whole season and part of another. But it is not necessary to devote the land for this purpose alone during all of the first season. People usually set their strawberry-plants in early spring, in rows from three to four feet apart, without anything between them, and give clean cultivation right through to the end of the season. This means a lot of work without any returns for a whole year. This past season I made a treble combination, and it has given me most excellent results, the combination consisting of strawberry-plants set in rows which were four feet apart, three feet apart in the rows, of early cabbages set midway between the strawberry rows, and of Gibraltar onions, about six of the latter being set at a distance of three inches apart midway between each two strawberry-plants in the rows. Thus the plants stood about as follows:

```

ROW OF STRAWBERRIES AND ONIONS
X   I I I I I   X   I I I I I   X
      ROW OF CABBAGES
      O       O       O       O
ROW OF STRAWBERRIES AND ONIONS
X   I I I I I   X   I I I I I   X

```

Each X represents a strawberry-plant, each O represents a cabbage-plant, and each I represents an onion seedling. All of these plants were set out as early in spring as the ground could be gotten in readiness to receive them. The cultivation was all given with my Iron Age spike-tooth cultivator, of course set narrow, and required comparatively little time. The cabbages were all Early Jersey Wakefield, a few of the rows being started from seed sown in the hills, the remainder transplanted from cold-frame. The latter gave me the earliest cabbages, and I had a fine crop of them, every plant, almost without exception, making a fine solid head. The plants grown directly from seed followed closely after the others, and also gave good heads. Most of them were retailed at five cents a head. This crop alone paid well for the use of the land. It represented an acre rate of five thousand cabbages, and a money value of over two hundred dollars an acre.

* * *

Just as satisfactory was the outcome of the onion crop. I had in this patch as fine Gibraltar onions as I ever raised, almost every plant making a large, perfect bulb, and probably at the rate of not less than one hundred bushels an acre. These onions were sold at about one dollar a bushel, and thus added another hundred dollars to the two hundred dollars estimated as the acre rate for cabbages. The cabbages were harvested during the months of July, some perhaps in August, and in this month the onions were also gathered and disposed of. At that time the strawberry-plants had already thrown out many runners, some of them growing close up to the onions. But onion roots are very small, anyway, and the bulbs, although they may be surrounded by young strawberry-plants, can be pulled up without disturbing the other plants. The patch after that was thoroughly cultivated, and now appeared as a straight young strawberry-plantation, with thrifty runners, and giving at this time no indication that a crop worth three hundred dollars an acre had already been taken from it while the strawberry-plantation was in process of construction. I believe this was perhaps the most profitable combination crop that I could have devised.

* * *

THE STRAWBERRY-PATCH.—At this time (late fall) this strawberry-patch looks very promising. There are just about plants enough, in some places too many. The free plant-makers, like Splendid, Brandywine, etc., might have been planted four feet apart in spring,

and would then have given enough plants to make a fairly well-set but not overcrowded matted row. The new Rough Rider (Farmer's introduction) is also a good plant-maker, and the plants are very strong and thrifty. The vacant space between the rows (four feet apart, as already stated) is over two feet in width, allowing the free use of the spike-tooth cultivator. Only once did I use a wider-bladed cultivator; namely, just after the cabbages and onions were all cleared off. This was done for the purpose of tearing out a few stumps and larger weeds, then left, and the surface was afterward put in smoother shape again by means of the spike-tooth cultivator. Just at present I use this strawberry-patch for a dumping-place for the ashes as they come from the cook-stove every morning—a mixture of coal and wood ashes—spreading them thinly along the rows. If I have any poultry manure I wish to dispose of, it is applied in the same fashion. Thus, during fall, winter and spring I can go over quite a patch, making it very rich and productive, it already being well filled with decaying organic matter from earlier, heavy applications of stable manure. After the first heavy freeze a coat of marsh-hay or other litter will be put on, although rather thinly. Thus I am sure that the plants will winter well, and not be heaved out by alternate freezing and thawing. In spring the litter is raked off to one side, the vacant space between each two rows cultivated (again with the spike-tooth cultivator, going a number of times in the same place) and the litter raked back on the cultivated surface again. If this treatment will not give me fine berries another season I do not know what else would.

* * *

GIBRALTAR ONION.—I cannot forbear to speak another good word for the Gibraltar onion. Some of my neighbors whom I have supplied earlier in the season with my Giblaltars are calling for more, and send me word that they will gladly pay me one dollar a bushel for two or three bushels. But as I have sold out long ago I cannot supply these onions any more. They are surely the finest thing in onions ever invented, at least for slicing up to eat raw, with or without vinegar. For my own eating I would not hesitate to pay two dollars a bushel for them rather than take common onions at fifty cents a bushel. I would also greatly prefer them to the imported Spanish onion of our green grocers, for they are much milder and as fine-grained as any onion grown. If people once understand this, and get fully acquainted with this fine onion, the demand for it will be immense, and people will be ready to pay the price. If I wanted to buy some as good as I had them this year, and in former years, too, I might offer five dollars a bushel for them and not be able to get them. So far as known to me, the seed of this onion is all imported, and sometimes not very reliable for that reason. Much of the seed sold last winter and spring was undoubtedly old and of very low vitality.

* * *

A CURRANT SUPPLY.—The currant as a fruit for canning, for jelly and syrup has always been in especial favor with me. I believe it is one of the most wholesome of all fruits, coming next to the lemon, and I have no doubt that the currant-acid has great virtues as a germ-killer. I know also that the juice of this fruit acts as a powerful aid and stimulus to digestion in my own individual case. Last spring I planted one hundred more bushes—seventy-five of the new President Wilder, which appears to me the best of the red sorts now in existence, and twenty-five of the White Imperial, which is perhaps the best for home use, but being a white sort not of much value for the general market. They were nice plants, being bought at one of our western New York nurseries for five dollars for the lot, and were planted in good garden soil, the rows being six feet apart, and the plants five feet apart in the rows. Good cultivation was given right along, and the plants have made a very fine growth, so that I expect quite a crop next year. I sometimes neglect to plant currants and gooseberries, etc.,

because I fear it will take some years before I can gather much fruit from them. But I find when I set good strong plants in good strong soil, and treat them well right along, that I can get quite a crop the next year after planting. I always like quick results, and I can secure them if I only manage right. Next season I shall surely have a bounteous supply of currants from these one hundred bushes, and some to spare, and every year after that I can calculate on having enough to supply my own household, and the neighborhood besides. It will make a nice and attractive patch, too, and in a few years the bushes will be immense.

T. GREINER.

2

SCHOOL GARDENS

The common country school is still an unsolved problem. I do not need to picture the surroundings of the most of them, but when we know that environment has so much influence in the formation of character and habits of after-life it is greatly to be regretted that early school-life should not be surrounded with all the appliances necessary to infuse the mind with a love of the beautiful and a knowledge of the useful. The great majority of us now are, and are to be, dependent on agriculture and its handmaid, horticulture. It follows, then, that nature-study, including plant-life, fruits and flowers, should be a systematic part of school-life. Nature has done her part for us. We have ample grounds, a fertile soil and a climate adapted to a great variety of production, and a perpetual school fund, self-imposed, that enables us to rank with any other people educationally. The city schools are working under different conditions, but the kindergarten has been found to be the basis of much of their superior excellence. Some of the teachers of the city schools will claim that there is no room for more studies, that the pupils are now overworked, and no doubt this is true in some schools. The drill is all mental and intellectual, the physical entirely neglected. We are willing to admit that a broad intellect is more capable of grappling with the necessities of active life than a dwarfed one, but nature-study as indicated has a tendency to develop all the faculties, to stimulate habits of thought and of observation, and to round out an otherwise incomplete life.

Sweden now takes the lead of other countries, as every school there has a garden. Germany, France, Austria and Italy are closely following. There are few schools in this country with a garden attached, and fruits, vegetables and flowers are planted and cared for by the pupils. Their influence has proved most beneficent in checking the tendency for vandalism among the boys and in affording a means of pleasant occupation of leisure time, stimulating them to habits of industry and usefulness and storing the mind with practical knowledge available in mature life.—O. M. Lord, in Minnesota Horticulturalist.

ORCHARD AND SMALL FRUITS

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INQUIRIES ANSWERED

Japan Quince.—B. A. L., Wheelersburg, Ohio, writes: "Please inform me whether or not any use can be made of the fruit of a flowering quince. If so, how?"

REPLY:—The fruit of the flowering quince (Japan quince) makes a very good hard jelly, and is often used for this purpose.

Planting Lindens.—W. H. D., Hollandale, Wisconsin. It is much safer to plant the linden, or basswood, in the spring than in the autumn. If set in autumn the trunks should be protected by wrapping with burlap or other material, to prevent sun-scald, as they are very liable to this trouble before they become well established in the soil.

Buckthorn.—J. N., Lake City, Minn., writes: "Is the English buckthorn the same as the native buckthorn, and which is the better tree?"

REPLY:—The native buckthorn is seldom found in nurseries, and when buckthorn is called for, the English buckthorn (*Rhamnus catharticus*) is always meant. This is one of the best hedge-plants for the Northern states, and is perfectly hardy in any good soil in our Northern states.

Transplanting Apple-trees.—H. C. S., Abington, Mass. Apple-trees may be safely transplanted in the autumn at any time from the tenth to the twentieth of October, and even considerably later planting is occasionally practical.

Nitrate of Soda for Strawberry-plants.—C. H. W., Couqueautville, Pa. Nitrate of soda costs about fifty-five dollars a ton, and contains about sixteen per cent of nitrogen. In using it not more than one hundred and fifty pounds an acre should be applied at one time, since when applied in excess it has an injurious effect upon the living nitrogen-forming bacteria in the soil, which is necessary for the best growth of plants. However, if you wish to apply more than this amount you can safely do so by applying it at intervals of two to three weeks.

Oyster-shell Bark-louse.—A. D. S., Carpenterville, Ill. The twigs received are infested with the insect known as oyster-shell bark-louse, or scale, a very injurious insect, although not nearly so injurious as the San Jose scale. Your trees probably were infested when received. I think your best treatment will be to cut off and burn much of the infested new growth, and then on a bright breezy day go over all the remaining scales with kerosene, putting it on with a brush very thinly. This treatment will kill the scales, and if not much kerosene is used it will not hurt the trees, as it will dry off quickly on a bright dry day. A little pruning will probably do no harm to the trees.

Borers in Carolina Poplars.—G. A. H., Van Wert, Ohio. In regard to Carolina poplars, this tree is simply a form of our cottonwood, which has been selected in Europe, where it is quite popular. The borers are often very troublesome on them, and the only way of keeping them free from borers is by going over the trees occasionally and digging them out. We may have several years in which the borers are very destructive, and then quite a period when there is scarcely any injury from them. If your trees are now badly injured by borers in the trunk, so that you think that the tops are likely to die, you can get a good growth by cutting the trees off at the top of the ground. The stump will then sprout in the spring, and by selecting one good, vigorous sprout and destroying all the rest you will get a good-sized tree the first year. If in digging out the borers bad wounds are made they should be painted with white lead, or, what is better, they may be filled with grafting-wax.

Fertilizing Fruit-trees.—T. I. F., Gaithersburg, Md., writes: "I have been a subscriber of the FARM AND FIRESIDE for some years, and would like some advice either by letter or through the columns of the paper. I have a side lawn filled with dwarf pears, and I want to work around them this fall. What kind of fertilizer and manure is best for me to use around them? I also have some peach-trees in my garden. What kind of fertilizer must I use on them? Also manure? Is kainit good for them?"

REPLY:—If your pear and peach trees are making a strong, satisfactory growth I should not recommend you to work any manure into the soil around them, but if the growth is insufficient it is desirable to do so. Cow manure is one of the best manures for this purpose, and if it is supplemented by about one fourth of a pound of kainit to the tree so much the better. The best time to apply the kainit is probably in the spring, just before the growth starts, since it is very soluble in water and liable to be washed out of the soil during winter if applied in autumn. The cow manure could, however, be applied to advantage this autumn.

San Jose Scale on Pears.—T. B., Columbia, Pa. The pears received are badly infested with the San Jose scale. This is one of the worst pests known to our orchards. It is probable that the only satisfactory remedy is to dig out and burn all the infested trees, but I would suggest that you send samples of the disease to your experiment station at State College, Center County, Pa. This insect multiplies with wonderful rapidity, and efforts to destroy it have not met with very general success on account of its being almost impossible to apply them thoroughly enough to destroy every scale on a given tree. The best remedy is fumigating with hydrocyanic-acid gas; but as this gas is a deadly poison, and should only be used by an expert, who must then have suitable tents, it is probably quite out of the question in your case. I would suggest that if you cannot bring yourself to the point of destroying your diseased trees, that you destroy all the infested fruit by burning or burying in the ground; prune back as much of the new growth and branches that can be spared, and burn them, and then on some bright, cold day, after the leaves have fallen, paint the whole tree with clear kerosene, using great care to wet every crevice that could contain these pests. It would be a good plan to scrape your trees, if they have rough bark, before painting, but the scraping should be burned. Much care should also be taken not to get on any more kerosene than is necessary to wet the surface, for much kerosene is liable to hurt the bark. The oil should not be applied on a cloudy day, since it does not dry quickly enough. The best weather for this is a sunny, cold January day, when the oil evaporates quickly.



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with the Wolverine Ball Bearing **TRIPLE GEARED MILL.** Grinds ear corn and all other grain, fine or coarse, grinds finer and a more uniform feed than any other sweep mill made, and **THE ONLY SWEEP MILL** that gives you as fine feed as a burr stone mill. **GRINDS FASTER** than any other geared mill because burrs make 3 turns to each round of the team, and we use the largest burrs of right shape to draw the grain into them. **PULLS EASIER** because we use ball bearings. **LARGEST GEARED MILL** made, yet **OUR PRICES ARE LOW** because we have no agents. We sell to you direct. **WE GUARANTEE** this mill to grind 1-3 more than any other geared mill made. **TRY IT**, and if it don't do as we say, you return it at our expense. 8 sizes sweep mills, \$14.25 and up. Send for free catalogue. **Marvin Smith Co.,** 55-57 N. Jefferson St., Chicago, Ills.

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by a new discovery, odorless and tasteless, which any lady can give in tea, coffee or food. It does its work so silently and surely that while the devoted wife, sister or daughter looks on, the drunkard is reclaimed even against his will and without his knowledge or co-operation. Send name and address to Dr. J. W. Haines, 2945 Glenn Bldg., Cincinnati, O., and he will mail enough of the remedy free to show how it is used in tea, coffee or food.

BEST PAY

A new line of Agency Work for either sex, easy and extra profitable; we give special advantages. Send for terms and Free Outfit. Address **FARM AND FIRESIDE**, Springfield, Ohio.

CHINESE AGRICULTURE

[CONTINUED FROM PAGE 3]

China for a decade, and it is getting worse every year. It is asked How can China continue to buy foreign goods while the country produces less and less of what the foreign merchant wants? The man who earns one thousand dollars and spends two thousand will sooner or later cease to spend anything. He will have nothing to spend. So it seems to be with China. I acknowledge the point is well taken. The present so-called government of China is fast bringing about such a state of affairs. But that is just where there is good ground for hope of a better time coming. The people are finding out that they must open their mines and the enormous latent resources of the country or starve. You may depend upon it they will choose the former alternative. China under an enlightened administration would become a great producer, as well as consumer, of all kinds of raw materials and manufactured goods. This one quarter of the human race has been living for three millenniums off the surface of a soil that covers many of the richest mineral deposits in the world. But there can be no reasonable doubt that sweeping changes are imminent in China. A vast planet is about to be added to the world's commercial solar system, and no people in the world will be more benefited by the new addition than the farmers of the Great Republic.

THE FARMER'S GREAT NEEDS

The subject suggests to my mind that we should study the condition of the farmer to find out his needs. We are fully aware his needs are many and changeable. I believe farming is one of the honorable callings of life, and one of first importance, for by their toil are the necessities of life produced. The destiny of a nation depends largely on the condition of the farmers. I believe one of the farmer's greatest needs is to receive a better reward for his honest toil. If this be true he should receive a fair share of the profits in exchange for his products, and an equal share of life's comforts and enjoyments.

The independent farmers of years gone by, when they produced nearly all their needs, have passed away. The log cabin and home-spun clothing then afforded both comfort and happiness, the road-wagon the necessary means of travel, and to be able to read and write was considered sufficient education for a farmer. These conditions have all been changed. By the honest toil of the farmer the vast forests have been changed to beautiful homes, the once-despised pond has become the most productive part of the farm, and the crooked byways have been changed to good pikes. Instead of the log cabin we now find the beautiful cottage. Indeed, we might say the wilderness has been made to blossom as the rose. We who are permitted to live in this the dawn of the twentieth century should feel truly thankful that it is our privilege to live in this enlightened age. Doubtless our forefathers looked forward, hoping that future generations would enjoy the benefits of their toil. But with all of these added blessings added wants and actual needs have come. The farmer can no longer boast of his independence, but must meet the great battle of life in a business way. The world has moved forward with great speed, and I believe will continue to advance, and future generations will enjoy blessings and encounter difficulties to us unknown. The farmer should keep abreast of the times; that is, he should be educated and have that which affords comfort and happiness.

The ingenuity of man has brought forward machinery that enables the farmer to perform his work with great rapidity and with less bodily labor, but more intellectual force is required. While it has been a great blessing it has also destroyed much of past independence, for we must now look to the manufacturer for our improved farming implements. We can no longer afford to make the home-spun clothing; we must depend upon the merchant for clothing and other necessities. We must exchange our products for our needs; therefore, we should adopt business methods in farming, and keep books, that we may know if we receive equal exchange value for our products. The exchange value is a very important subject and should be studied by the farmer very carefully. It is the means of affording reward and increasing or diminishing our capital invested. We find all classes seeking to increase the exchange value of their commodities. In this strife it seems the capitalist is getting the lion's share. By combining they are able to control the production and thereby increase the exchange value of manufactured goods. This, I think, is against the interest of the farmer and against the best interest of a free government. When the farmer looks over his yearly toil he wonders what has become of his share of the profit, and for this reason the farmer should keep a complete record of his yearly transactions, and find out if his year's labor has been profitable; and if not, see wherein he has failed.

Education is one of the great means of bettering the condition of any class or calling. We should read the papers and try to become well informed. Education is a life-work, and we should not neglect the importance of educating our children, that they may be better prepared to fight the great battles of life. The farmer needs to strengthen the mind as well as the muscles, and be prepared to fill any position in life. He should be found in our legislative halls, and if we expect our children to be content on the farm they must have opportunity to advance in public life. The farmer should demand such laws that would destroy all greedy trusts, and demand equality in representation and taxation. To make these demands felt and have them answered we must unite. One of the farmer's great needs is to unite in these demands, forgetting not the good of all. J. H. Moore.

VALUE OF THE ANGORA GOAT

After the removal of trees in clearing land the persistent growth of shrubbery becomes a problem not solvable by the brush-hook or the ax. Some Texas genins, however, has solved it by means of the goat. Goats, in number proportionate to the area to be cleared, are turned upon the land and set to work to browse to a successful issue. The much-despised goat shows his generous goathood in not only giving his distant relation, the sheep, an equal share of the pasture, but magnanimously turns over to the sheep all the rich and succulent grasses. Nor is this all that belongs to its credit. The goat is the sheep's sure protector. No murderous gang of dogs dares invade the friendly community of the sheep and goats, for General Billy orders his male troops to the furious fray. No dog ever escaped alive. The sheep are shy and cowardly. But the guardian rams of the flock encircle the bloodthirsty dogs and butt them to death. In these encounters the goats and rams join heartily, never showing jealousy.

We as a prosperous people have never given the goat his just deserts. We have failed to give him credit for his moral worth and his physical usefulness. In Roquefort, France, the dairy-men combine the milk of the sheep and of the goat in making the most delicious cheese, which we import at four times the price of our own dairy cheese, however excellent. We also import millions of high-priced kidskins tanned and in French gloves, to the detriment of home industries.

In Kansas City I have found a man who is willing to take advantage of the invention and economy of a shrewd Texan. He, too, will clear up with Angora goats a thousand acres of brushwood for the purpose of establishing the largest dairy in the United States. It is his purpose to establish a dairy of the competitive dairy breeds of the world. This enterprising man is one of the Armours, of Kansas City.—H., in New York Tribune.

SUNLIGHT AND FRESH AIR

Do not fail to have the stables flooded with both sunlight and fresh air. No dairy-cow can give a good account of herself if kept in a dark stable and in impure air. This is of the greatest importance.—Farm Journal.

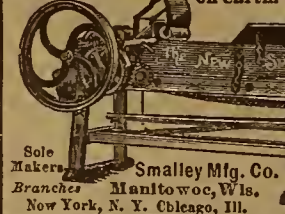
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is often enough to do some things. It is often enough to buy a wagon if you buy the right kind. The



ELECTRIC HANDY WAGON

lasts that long under ordinary conditions. First the life of a wagon depends upon the wheels. This one is equipped with our Electric Steel Wheels, with straight or stagger spokes and wide tires. Wheels any height from 24 to 60 inches. It has heavy steel axles, get loose, no re-setting, hubs can't crack or spokes become loose, felloes can't rot, swell or dry out. Angle steel hounds.

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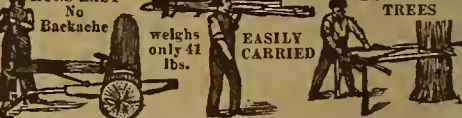
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SCIENTIFIC Grinding Mills

both sweep and power, make feed go the farthest. Crush and grind ear corn, shucks on or off, and all other grains, separate or mixed. See advantages in free catalog 50.

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THE POULTRY-YARD

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IMPROVEMENT OF THE BREEDS

THE efforts of the breeder of today are directed to the improvement of stock and to its distribution among the people who raise poultry as a food supply and for practical purposes. Men of this stamp appreciate the effects of the "hen fever." Some of them have had the fever severely themselves, but they know it awakened the general public to the sense of the value of legitimate poultry-keeping. New breeds have been introduced and old ones improved until the general average of the poultry of the country is a great deal better than it was two or three decades ago. While some of the inexperienced in the fancy who have not been successful may suppose this general betterment but a meager outcome for the money they have lost and the wisdom they have gained, yet the real fancier, whose object has been to improve the general stock and increase its productiveness, is entirely satisfied with the situation. The occupation of the speculators and sharpers is gone, but the business of the legitimate fancier and breeder is still fair. There will always be a market for good stock, the best will always bring the best prices, and level-headed men will find profit enough in breeding pure breeds to pay running expenses, with a margin of enthusiasm and emulation which makes the enjoyment of competing with the brethren of the fraternity. Every one will agree that the profits in business are greater or smaller according to the management of that business, and each should train himself to avoid all the mistakes and calamities that have proved a disadvantage toward success. The breeding of poultry is certainly as much a business as manufacturing, banking, etc., and therefore needs the attention and special training to make it a success, the same as any other business. If possible, let the future make the past successes doubly successful by the exercise of greater diligence, greater care, and closer attention to all the requirements essential to that success. There are thousands of business men who can readily see that they have only themselves to reproach for waste of time and resources, and in making a careful survey of their field of operation can plainly see the mistake of that position, which, had they been true to their work, would certainly have yielded them a bounteous return. Certainly every one will agree that the constant improvement of poultry will have much to do with battling against the common enemies—ignorance and lack of judgment—from which the progressive poultrymen have suffered to a great extent. Every well-informed person knows the consequences of such a condition as this. There is a remedy, and it can be applied by appealing to poultrymen in general and creating a strong, healthy sentiment in regard to the subject of improvement, and which will sooner or later sweep the adherents of this common evil into oblivion. The point to be attacked is certainly one of which all have some knowledge, about which all have thought, and must feel, that an abiding interest has been taken.

THE NON-SITTERS

The non-sitters comprise all the different kinds of Hamburgs, Spanish, Leghorns and Polish, and also some of the French fowls. To eradicate the sitting instinct, which is so inherent in wild birds and so necessary to their existence, poultry-keepers have taken the least constant sitters for many generations to lay eggs for hatching. This is a curious instance of what can be done by the breeders' art, and is quite valuable, as division of labor works as economically in the poultry-yard as in human society. Non-sitters, if well bred, will not give one confirmed case of sitting in fifty birds, though they

sometimes sit for a few hours or a day, but soon leave off. They often have periods of leaving off laying for several days or a week. These correspond to the sitting fever of incubating breeds. There are instances of fowls sitting steadily, although belonging to a breed of non-sitters, which show a reversion to the primitive type when incubation was universal. Some crosses between breeds may be considered very desirable, but non-sitters should be kept pure, or the trait which constitutes their principal value is lost. Where many fowls are kept it is better to have the larger part consist of some non-sitting breed. A great saving may be made by keeping a sitting breed to produce a few good mothers, and the rest—say three fourths of the flock—of some breed of non-sitters. It is as easy to take care of two hundred non-sitting hens during the incubating season as one hundred of a sitting variety, as sitting hens and broods entail considerable labor.

EARLY CHICKS THE HARDEST

The first eggs laid are always the best for hatching. They produce the finest and most uniform chicks, which show all the finer points and develop sooner, where the breeding-birds are chosen with an eye to the nearest possible perfection. Very early hatched pullets commence to lay too early for breeding purposes, unless one has warm shelters and heated inclosures for the chicks in cold climates. With the first clutch the hen is in better strength and ability to stamp her progeny with that degree of uniformity and perfection which is aimed to be established. The cock later in the season always becomes weakened from overuse, and his chicks are weak and therefore more prone to diseases. Good, strong birds that inherit constitutions withstand all minor evils and grow rapidly. To produce these the parent birds should be hardy and able to withstand all the attacks of insidious diseases that of late years creep into the hen-roost in open daylight, making victims oftentimes of the strongest birds. Losses from the foes and vermin that steal under the cover of darkness (bitter experience, perhaps, to some) have taught many to guard against them, but nothing is able to resist the attacks of the deadly diseases that come through carelessness and inattention.

PRICES FOR PURE BREEDS

It is supposed that breeders charge a high price for fowls and eggs, but when it is considered that the breeding of pure breeds is a different matter from that of keeping fowls without regard to merit the prices are really very low. A sitting of eggs is a beginning of an interest in poultry, but the sitting procured, and at the outlay of only a few dollars, transfers the stock of the most successful breeder to the yard of the novice, as the qualities of the parent are transmitted to the offspring. What it has cost the breeder to bring his stock to the desired qualifications no one but himself knows, but yet for a small outlay he allows every one the privilege of possessing that which has given him pride, pleasure and profit. In viewing the matter thus it seems almost impossible that a buyer can object to fair prices, and yet it is done. Only the best pays, and only the best should be procured, while a beginning can be made at a very little expense.

BELGIAN HARES AND POULTRY

The present high prices asked for Belgian hares do not really express the value of the animals, so far as market qualities may be concerned. The "markings" of the legs, ears, the "flicking," etc., rather than real merit, fix the prices. Why such animals should

be "boomed" in poultry journals is a mystery, as they have no connection whatever with the feathered tribes, and they will never assume the place of poultry. It will be but a short time before they will find their proper level. They may be valuable as "pets" to those who care more for pleasure than profit, but they have been pushed forward under the most extravagant claims, and disappointment is sure to result to many. The best Belgian hare is not worth one dollar, so far as market qualities are concerned, yet such prices as \$200 and \$500 have been paid for single specimens on account of their "markings." The correspondents of the FARM AND FIRESIDE have timely and wisely protected its readers from venturing too hastily into the Belgian-hare fancy.

SMALL FARMS AND POULTRY

Careful management and untiring industry on the part of the proprietor of ten acres of land would produce a far greater profit, with a much smaller investment, than more pretentious operations carried on with the assistance and expense of uncertain hired help. Nothing is so stimulating as a proprietorship of land, however small the piece, and nothing so productive as garden-farming or the concentration of a large amount of labor and manure on a small plot of ground; its successful following would add millions of dollars to the productive wealth of other states where farm products are growing less year by year, and finally would do much toward settling the problem of profitable occupation for our large army of non-producers. Poultry-raising should be a leading industry on small farms, as fruit, poultry and bees can occupy the same ground in orchards, while confinement of the fowls for a short time will permit of growing vegetables and small fruits. Fowls bring in cash returns every month.

VARIETY IN FEEDING

Give the birds in the morning, if confined in yards, an ounce of raw lean meat, and about one quart of wheat and corn mixed at night. Green food of some kind may be substituted for the meat every other day. Twice a week in place of the grain give a mixture of four parts bran, two parts ground oats and one part linseed-meal, allowing a pint of the mixture (measured dry) to the flock. In regard to feeding, it may be mentioned that there is no rule that can be made as to "how much to feed." No two birds eat the same quantity, and one kind of food differs from another. No one can inform his neighbor how to feed. Each flock must be fed according to its conditions. The only safe rule is to observe, and then feed according to requirements. The main point is not to feed too much.

INQUIRIES ANSWERED

Asiatic Breeds.—B. N. E., Atco, N. J., writes: "I am a novice, and request you to mention which breeds are known as Asiatics." **REPLY:**—The Brahmas, Cochins and Langshans. All Asiatic breeds have feathered legs (shanks).

Bantams.—S. M. L., Evansville, Indiana, writes: "I wish to keep a few Bantams in this city, and would like a breed that will be contented in confinement and not fly over a fence."

REPLY:—Probably the Pekin (sometimes known as Cochins) Bantam will answer the purpose. They are of several varieties, according to color. The Game Bantam can fly over high fences.

Plymouth Rocks.—C. L. G., Racine, Wis., writes: "Do Plymouth Rock fowls have yellow legs? Some of my pullets have dark shanks."

REPLY:—The males usually have fairly yellow shanks, but pullets sometimes have dark-shaded shanks, which partly passes away as they mature. But few flocks of Plymouth Rocks have strictly yellow shanks.

Pulling Feathers.—A. S., Hemlock, Wis., writes: "What makes my hens pull feathers from their necks and other portions of their bodies? They get a variety of food, and seem to be in good condition."

REPLY:—Feather-pulling is a vice. One hen begins it and the others learn. It is caused mostly by idleness and confinement, but sometimes from no cause but accident. There is no cure except to daub the hens with wood-tar and grease, or separate them until they forget it, though some use poultry-bits. Such flocks should be destroyed.

Powdered BORAX

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But unscrupulous parties push cheap adulterated Borax, and Soda is the favorite adulterant. Soda is irritating, not soothing; smarting, not healing.

A SIMPLE, SURE TEST: Pour a few drops of vinegar on a little borax, if pure it will not move—if soda it will bubble and is bad.

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HATCH regulating, lowest priced first class hatcher—the **EXCELSIOR Incubator**. Hatches the largest per cent. of fertile eggs at the lowest cost. **GEO. H. STAHL,** Quincy, Ill.

MISTAKES COST MONEY. You need make no mistake in buying an incubator if you send for our **NEW PREMIER Incubator.** Give it a thorough trial, when satisfied pay us for it. None better made. Took first premium at World's Fair. Also sole makers of Simplicity Incubators. Send 5c. postage for illustrated catalog and "Poultry Helper." **COLUMBIA INCUBATOR CO.,** 21 Water St., Delaware City, Del.

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The IMPROVED VICTOR Incubator hatches all the fertile eggs; is simple, durable and easily operated; 168 page catalogue containing information and testimonials. Sent free. **GEO. ERTEL CO.,** QUINCY, ILL.

KEEP THEM AT IT. Hens must lay all year. Feeding plenty of roots and vegetables will do it. Our **BANNER JUNIOR ROOT AND VEGETABLE CUTTER** cuts all roots and vegetables fast and fine. Easily consumed by chicks and ducklings. Send for free booklet. **O. E. THOMPSON & SONS,** YPSILANTI, MICH.

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QUERIES

READ THIS NOTICE

Questions from regular subscribers of FARM AND FIRESIDE relating to matters of general interest will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two WEEKS before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Hay-presses.—D. J. C. Withers, S. C., writes: "Could you give the best and cheapest way to build a hay-press?"

REPLY:—We believe you can buy a better and a cheaper hay-press than you can build. There are a number of good ones on the market and freely advertised.

Mold in Cellar.—F. L. G. Peachbelt, Mich., writes: "What will destroy the white and blue mold in a cellar? The cellar seems dry, has deep, dry sand in the bottom and is well aired."

REPLY:—Whitewash. And you can add to the whitewash a little carbolic acid.

Haul Manure as it is Made.—J. R. G., Brownsville, Tenn., writes: "Which is preferable—to keep manure under shelter or in an inclosed pen with no covering?"

REPLY:—Wherever and whenever it is practicable the best way is to haul and spread stable manure on land as fast as it is made. It is better to keep manure under cover, solidly tramped down, than to allow it to lie in an open barn-yard.

Keeping Ice.—W. E. C. Ripley, W. Va., writes: "I have an ice-house, wood, double wall, the inner wall being eighteen inches from the outer, the space being filled with sawdust. Would the ice keep as well if put directly against the board of the inner wall, or should there be sawdust between? The objection to the latter is that if it is not necessary it takes much needless room."

REPLY:—As you cannot easily fit the ice closely against the inner wall, fill in one or two inches of sawdust.

VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two WEEKS before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Nell Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

Sow Eats Chickens.—C. F. B., Cicero, Ind. If your sow is too fond of chickens, the best way will be to keep the chickens away from the sow, or to keep the sow in a place away from the chickens. If you can do neither, fatten the sow and convert her into pork.

Has Been Kicked.—A. B., Schaghticoke, N. Y. Since the wound on the metatarsus (between hock and pastern joints) of your colt that has been kicked is yet open it is pretty certain that either the bone or the periosteum has been seriously injured; and as you live in a state abounding with good veterinarians it will be to your advantage to intrust one of them with the treatment of your animal.

Chronic Discharges from the Nose.—W. W. P., Taylorville, Ill. The offensiveness of the chronic discharge from both nostrils of your mare is a sure indication that some destructive process is going on somewhere, probably in some bone or cartilaginous tissue; but since the animal shows difficulty of breathing, and produces roaring sounds, most likely in the latter. As neither the exact seat nor the nature of the morbid process can be ascertained from your description I advise you to have your mare thoroughly examined by a competent veterinarian, and then to follow his advice.

Calves with Sore Feet—Pigs Coughing.—E. K., Ouaga, Kan. Keep your calves on dry ground, out of mud, water and manure, make twice a day a liberal application to every sore a mixture of liquid subacetate of lead, one part, and olive-oil, three parts, and your trouble will soon be at an end, provided you keep your calves also in the future out of mud, water and manure.—As to your coughing pigs, if they also have access to low, wet and muddy places, or to stagnant pools and ditches, it is possible that their coughing, sickness and death are exclusively caused by the presence of large numbers of lung-worms in the bronchial tubes; but since you have lost seventy-five out of one hundred it is more probable that swine-plague (so-called hog-cholera) is among them and constitutes the cause of their sickness and death. You say you have found worms, but neglected to say where you found them and to give any description by which they might be recognized. Swine-plague and the presence of worms are often combined.

Belgian Hares.—S. S. As long as the symptoms of the disease are fatal to the hares or rabbits (Leporines), and the morbid changes presented at a post-mortem examination are not given, I cannot return any other answer than that given to A. D. Carrollton, Wash., in the FARM AND FIRESIDE of October 1st.

An Umbilical Hernia.—S. M. N., Huxtontown, Pa. What you describe is undoubtedly an umbilical hernia. Since your colt is only five months old and the hernia only a small one there is yet a possibility that it may disappear without any treatment. If it does not by next May it will be advisable to have the colt operated on by a competent veterinarian. The operation itself is simple enough, and invariably successful if properly performed, but for that very reason it should not be performed by any one who is not competent, and therefore no description will be necessary.

Chronic Gonitis.—C. A. K., Baltic, Ohio. If your statements are taken literally the only diagnosis that can be made would be "chronic gonitis" (chronic inflammation, or rather degeneration, of the knee-joint), an incurable ailment. But as spavin, a much more frequent disease, causes the position of the leg and the movement of the same to be very similar, except that the latter is less stiff and more jerky, and as you may possibly be mistaken concerning the "lumps" below the knee, or stifle-joint, the disease possibly may be spavin, and the prognosis, therefore, not so absolutely unfavorable. The annual article on spavin, ringbone and navicular disease will appear this year in the December 1st issue of FARM AND FIRESIDE.

Food for a Young Calf.—E. A., Lisbon, Iowa. If the skimmed milk is sweet, not sour, it may do. Feed it until the calf is old enough and abundantly able to get along without it, and then you may gradually withdraw it. I would not recommend middlings, but rather give ground oats or boiled oats and even some corn-meal with it. As soon as the calf is able to eat rough food give some fine and sweet hay, but see to it that it is always fresh; in other words, offer several times a day a small quantity, to be gradually increased as the calf gets older and has learned to ruminate. A new-born calf should receive, if possible, pure milk of a fresh-milking cow at least for a week or ten days, and then skimmed milk may gradually be substituted.

Three Sick Horses.—Th. L., Woodland, Mo. If I understand you, you had three sick horses after you had husked corn one day, and that the two horses which could get the least corn were the sickest, and that one of these died. If you had described the symptoms of the horses while sick, and had made a post-mortem examination of the one that died, and given an intelligent account of what was found, it might have been easy to answer your question; but with the very meager account of the case you have given I can only make a guess that in the first place your corn was stunted, and, further, that the horses which could get the least amount of corn and were the sickest got the most stunted, and that it probably was the latter that caused the disease, and the death of that one horse.

Warts on Lips and Nose of Colts.—I. S. S., Birehton, N. Y. Such warts, usually small and present in large numbers, are very troublesome, but as a rule will disappear in the course of time without any treatment. Since they are of frequent occurrence in some families of horses, and in others do not occur at all, an hereditary predisposition is supposed to have something to do with their appearance. Where there are so many on the delicate skin of the nose and lips any application of heroically-acting caustics and removing them by surgical means are out of the question. If among the many small ones there should be some larger ones, making it more or less difficult for the animal to eat, you may clip them off with a pair of scissors; but as to the small ones I advise you to be patient and to leave them alone.

Texas Ticks (Ixodes)—Cow-lice (Hematopini).—F. V. O., Lynchburg, Va. Ticks and lice are entirely different things. Ticks are best removed by dropping a drop of oil on the head of each one. It will not do to pull them off, because the head, being fastened in the skin of the host, will tear off, remain in the skin and cause a little ulcer. Lice being a great deal smaller, and where present usually much more numerous, are best removed by a thorough wash of the whole animal constituting the host. There are several remedies effective in removing lice; for instance, a tobacco decoction, a four-per-cent solution of creolin in water, etc.; also various quicksilver preparations are very effective, but they should never be used on cattle. In very cold weather, especially where but few animals require treatment, dry Persian insect-powder may be dusted in between the hair. But all the various remedies have only a temporary effect unless all the places and things in or on which lice or mites may have been deposited are also thoroughly cleaned and disinfected. Very lousy cattle may require a second wash, to be applied about five days after the first. Then after the lice have been removed the cattle should be well kept and be well fed, at any rate sufficiently to cause them to gain in flesh, because parasites like lice do not seem to feel comfortable on a well-fed animal, especially if the same is also well groomed.

So-called Champignons.—S. W. D., Edmond, W. Va. The swellings of the spermatic cords of your colts recently castrated are undoubtedly so-called champignons, caused by the cords being left exposed after performing the operation, and becoming infected with bothriomyces. The remedy consists in throwing the colts, laying the diseased spermatic cords free, and then applying clamps, prepared with sulphate of copper or some other antiseptic caustic, above the diseased parts of the cords; leave them on for twenty-four hours, cut away all that was below the clamps and one third of what was between them, and then sever any and all adhesion possibly formed between the stumps of the cords and the scrotum, so that the former may slip up into the latter and thus be protected against any further infection. A further description of the operation will not be necessary, because the latter must not be intrusted to anybody but a competent veterinarian, and he will not need any instruction.

Said to Have Been Foundered.—J. O. W., Clear Springs, Ark. If you have been told the truth, and your horse has been foundered and has never fully recovered, your horseshoer can easily decide whether the horse has puniced hoofs or not, for such will be the case if the truth has been told to you. Your horseshoer also is the man to apply the remedy, so far as a remedy is possible, by putting on a pair of good bar-shoes, which will relieve to a certain extent the diseased wall and sole and throw considerable weight upon the usually healthy frog. The bar-shoes, besides throwing considerable weight upon the frog, should have a wide web, very concave on the upper surface, so as not to come in contact with any part of the very tender sole, and at the same time to protect it as much as possible against any accidental bruising. Of course, this remedy is only a palliative one, but any other is out of the question. With good bar-shoes, reset every month, such a horse is capable of doing considerable slow work on a farm, for instance, but should not be used for traveling or for any work on hard and uneven roads.

Worms—Injured and Stiff Neck.—H. D. C., Eminence, Kansas. Your horses have probably been grazing on swampy land or have been obliged to obtain their water for drinking from stagnant pools or ditches draining the barn-yard or horse-lot. The worms you describe have already done all the damage they are capable of doing when making their appearance in the rectum, ready to pass off with the dung, and where they do their damage in the anterior mesenteric artery and other branches of the posterior aorta they cannot be touched, and are inaccessible to any medicine. Consequently, the only possible remedy consists in prevention; that is, in not allowing the horses to drink any stagnant water or water containing any drainage from a barn-yard or horse-lot, but to water them exclusively from a good, deep well or from a good spring.—Concerning your young horse with the injured and stiff neck, your description is very incomplete, and therefore I would advise you to have the same examined by a competent veterinarian. If the lesions sustained are not too serious there is a probability that the animal, being yet young, will in time get well without any treatment.


Sore Back—Swelled Leg.—A. W. K., St. Louis, Mo. The sore on the back of your horse does not heal because it is either exposed to too much irritation if the horse is not exempted from work, or there is a fistula—in other words, an abscess—in the tissues situated lower than the external opening. If the latter is the case no healing is possible until a lower opening capable of draining every part and particle of the abscess is provided and the already more or less callous walls, which lack vitality and can never form permanent tissue, are destroyed by means of suitable caustics, or removed. If the former is the case all irritation must be removed by giving the horse the necessary rest and providing protection against everything (flies, for instance) that will irritate the sore. If all this is complied with, an application twice a day of a mild antiseptic—if the sore is an open wound, and the whole suppurating surface exposed, a mixture of iodoform and tannic acid, equal parts by weight, will answer, and if there are fistulous canals, an injection twice a day with a four-per-cent solution of creolin in water will suffice—will soon effect a healing. If, however, it is ascertained by careful probing that you have to deal with one or more fistulas you will save much trouble and time by not undertaking the treatment yourself and by employing a competent veterinarian.—Concerning the swelling of your horse's leg, first ascertain whether there are any sores on the posterior surface of the pasterns, so-called scratches, for if there are you will not succeed in permanently removing the swelling until these sores have been brought to healing. This can be done in a comparatively short time by making twice a day to every sore a liberal application of a mixture composed of one part of liquid subacetate of lead and three parts of olive-oil, provided the horse is kept on a dry and clean floor and out of mud, water and manure. If there are no sores give the swelled leg night and morning a good rubbing and keep the same bandaged with a bandage of woolen flannel when the horse is not exercised.



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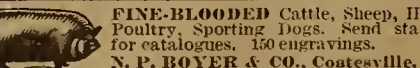
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THE GRANGE

Conducted by MRS. MARY E. LEE, New
Plymouth, Ohio

LET us enter into an agreement, you and I. Let us make the compact this very minute. Let us not wait until New-Year's day to begin. You know how the stiff binding of our New-Year's book keeps the leaves we turn flying back into the old position again. We want to get our compact, or "new leaf," into the rut of habit before 1901 opens. Then we can be the easier and better observe it. I think I heard you agree to the proposition, which is that for one year we will not in the presence of our family, especially the children, or in the presence of any one, whether friend, acquaintance or stranger, say aught of the drudgery of the farmer, the hard life he leads, and the poor business it is. We will not bemoan the hard life we lead. We will not denounce the farming class as a set of fools. We will earnestly endeavor, so far as in us lies, to perceive the beauties about us. We will, by every means in our power, beautify our premises. We will study to reduce our expenses, not by denying ourselves the comforts of life, but by studying our business earnestly, endeavoring at all times to reduce the cost of production to the lowest possible point compatible with the best product we can produce. We will strive to increase the fertility of our farms, the excellence of our products and the quality of the live stock on our farms. We promise all this, knowing that by so doing we will contribute to the welfare of ourselves, our family and mankind. I know that several thousand have entered into this compact with me, and I know that we will earnestly endeavor to keep it. We do this because we know we will be far better and happier if we do.

* * *

After all, when we come to know the ins and outs of the business that seems to us most profitable we will find the same anxiety and worry we find in our own. We see anxious eyes straining over accounts that will not show a balance on the right side. We see men soliciting custom that it cost about as much to get as it is worth. We see them giving credit to-day, knowing that to-morrow bills will fall due that must be paid, or a foreclosure will result. Yet the real business man of the right sort keeps a cheery face, a calm exterior. Did he do otherwise his rival would exult, his customers desert him just when prompt payments might save him from bankruptcy. For humanity all has a little of the spirit that prompted the founder of the great Rothschild bank to formulate this maxim, "Never have anything to do with an unlucky person or place." Then, a self-respecting man—a man who stands by his business—commands that wholesome respect of his fellow-men that it is essential to have. There are more cowards in the world than we think. There are more short-visioned people who see only the surface and never read the true story of life than we dare think. A confident, self-respecting manner that does not smack of arrogance or insolence is worth many dollars to a man. A swaggering, boastful or insolent bearing arouses ridicule and contempt as much as does a skulking, dodging one. Both arise from the same source—mental weakness and cowardice. Respect your business or you cannot respect yourself. Respect yourself or you cannot command the respect of others. In short, be a man. Use your eyes and ears and brain to help you in the battles of life. You need them or you wouldn't have had them.

* * *

The matter of dress enters largely into one's business standing. A man with a healthy business instinctively wants to be dressed in a manner that will not detract from his calling. There is no reason why the farmer should not be decently clad. His clothing need not be expensive. A business suit, suitable for business wear, can be gotten for twelve or fifteen dollars. As civilization advances people take increased care of their bodies.

The instinct of gentility renders this obligatory. Such ones will shrink from those who do not give proper care and attention to their personal appearance. This is not silly pride, as you may think, but the instinct of self-preservation. The slovenly person is at a disadvantage. "He belongs to a lower order of beings whose feelings are scarcely to be taken account of," say they. Compare your own feelings toward some slouching, hulking fellow whose very presence is a detestation to you. You will understand what I mean. There is a vast difference between the dude whose whole effort in life is centered in tying a Beau Brummel knot and the keen, shrewd business man whose clothing befits his business. We could learn a deep lesson from nature in this matter. Everything is in proportion. She delights in harmony. So should we. A farmer of some means went into a store to buy a handsome silk dress. His clothing was soiled by long wear. It was not the soil that is forgivable in one who just drives into town. He asked to see some dress-goods. The clerk threw down a bolt of calico. "I don't want such stuff!" said the farmer, savagely. "I would have you understand I am Blank of Blank!" He left the store in high dudgeon. Yet the clerk would have shown far less tact to have shown an elegant piece of goods to him. Had he been what he appeared to be such an act would have been unpardonable insolence in the clerk. He simply judged the man's standing by his appearance. For many, many years this seeming insult rankled in the man's breast. He often spoke of it with the deepest bitterness. He felt chagrin and mortification where he ought to have had a sense of pride in his success in life.

* * *

As I said, he was never precisely unkind. The defect in his brain was just absence of mind;

If he boasted, 'twas simply that he was self-made,

A position which I, for one, never gainsaid: My respect for my Maker, supposing a skill In his works, which our hero would answer but ill;

And I trust that the mantle which he used may be cracked, or he,

Made bold by success, may enlarge his phylactery.

And set up a kind of a man-manufactory—An event which I shudder to think about, seeing

That man is a moral, accountable being.

—James Russell Lowell.

* * *

There is a charm about these autumn evenings that belongs to no other time of the year. Everywhere there is a suggestion of rest and freedom from the earling cares of the world. The fire sends out merry sparkles. You burn wood if you can get it; you hate the dust and ashes of coal. You think eternity could offer no sweeter recompense than just this quiet, restful joy. You feel no pain now. If occasionally the wind howls, you draw more closely to your fireside and thank God for the privilege of living! Your head rests on your hand. You idly pick up a splinter and reach for a pipe. You start back with a nervous shudder. You never smoked a pipe in your life. What caused that involuntary motion? You are thinking of Carlyle sitting by his fire, as you are sitting, smoking his pipe and thinking over the mighty problems of life, as I hope you are thinking. You see this stern old son of Nature in a new light to-night—in the light of your own experience—and you involuntarily thank God that this fearless, dauntless man lived and loved and sorrowed and gave to the world the result of his anxious thought. You solemnly promise yourself that worn-out creeds, legendary and mystical virtues and the dull slavery of custom shall enthrall you no longer. You will shake off these habiliments of the past and stand out as an individual with the divine right of choosing or rejecting, as seems best to you. You will make yourself worthy of the spiritual relationship of Carlyle, Emerson, Dante, Goethe, Homer and Shakespeare. These were gallant spirits. They blazed new paths in the wilderness of thought. You reach to your library for one of these books. Sit down, you will not read it. The spirit which molds your life and thought and action

is with you now. You are too great to read to-night, or too small; which is it? You are lost in wonder and delight. In silvery streams inspiration flows in to you—you neither know nor care from where. The best that is in you leaps to meet the divine. You give a sudden start. What are those dark forms peopling the shadows? Heap on the fagots! Light your brightest lamps! You may get your book now. Find in it solace and consolation and forgetfulness if you can. What, you cannot? Will the dark deeds and thoughts, the biting jeer, the curt and heartless word you spoke to some struggling one, the lie you uttered, will they never down? Must they, like Banquo's ghost, rise up to accuse you? You kick the cat out of your way, box John's ears, and send Mary to bed to cry out her disappointment and anger. And then your accusing angel will not let you rest! All the mean things you have said and done shout their triumphant jeers in your ears. Will they never cease? Not until you promise them that you will no longer transgress the laws of nature. That in a world so full of bright and beautiful things you will not appear a dark blot on Nature's escutcheon! You know that you are a wretched marplot! That you sulk when you ought to smile, and curse when you ought to rejoice! You know that you are running counter to Nature's laws. She is serene and calm. You determine to adjust yourself to her ways, and earnestly set about to find her laws. You appreciate the idea the Greeks had of developing their spiritual nature. They taught music and poetry and art to temper the evil instincts of man as we practise boxing and fencing and rowing to develop the physical man. Then you go up-stairs and talk to John about his pets, and promise him a holiday to-morrow to go nutting. You kiss away the tears on Mary's face and tell her that you are sorry you were cross, that you were feeling bad and tired, as indeed you were. One cannot contemplate the evil of one's past without feeling bad. It is Nature's punishment. And you go back to the fire, turn low the light, and muse on life, its cares and responsibilities, its joys and its sorrows, its punishments and recompense. Who can say that angels of light do not hover over you to cheer and bless? Ah, these glorious autumn evenings! How stern they are, yet how kind! Were it not for them, and the sad, solemn, grand thoughts they bring, what would our life be?

* * *

Thank God every morning when you get up that you have something to do that day which must be done whether you like it or not. Being forced to work and forced to do your best will breed in you temperance and self-control, diligence and strength of will, cheerfulness and content, and a hundred virtues which the idle will never know. —Charles Kingsley.

2.

ORGANIZING A GRANGE

The busy season with the farmers is about over, and we are receiving letters from different sections of the country asking how to proceed to organize a grange. We will give general directions. Thirteen charter members are necessary, four of whom shall be women. In most states the initiation fee is one dollar for men and fifty cents for women; the dues ten cents a month. If you have no grange near you, and you do not know the address of the State Master, we will be glad to furnish you the name and address. If there seems to be an opening he will send an organizer to explain the working of the grange, give you necessary instructions and the unwritten work. We will be glad to put any one interested in the matter in correspondence with the proper authorities.

The experience of successful workers ought to give hope and encouragement to these workers. Few granges have been organized without hard, laborious effort on the part of two or three public-spirited persons. Farmers are conservative. It takes a deal of grit and energy to overcome this conservatism. In many instances the slow evolution of an organization is more likely to meet with success than the sudden growth.

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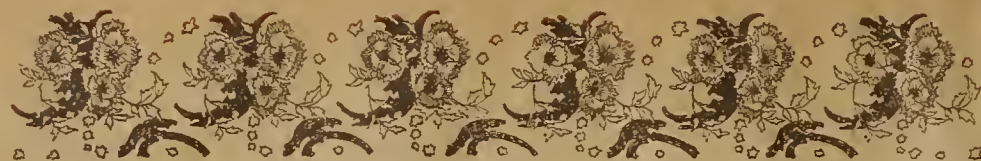
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A THANKSGIVING DINNER SEASONED WITH TRUE HOSPITALITY

By Ella Houghton

ONE of the prettiest Thanksgiving dinners, and one of the most pleasant of Thanksgiving days, it was ever my good fortune to engage and participate in was that of a very few seasons ago, wherein wealth played no part, but where good cheer and hospitality were so conspicuous and a part of the spirit characterizing the day that even a minor part of it could never be forgotten. And it were well worth one's while to do as did our host and hostess of the day, who made the very best of limited circumstances, and made everything so pleasant and every guest so welcome that there were none who did not hope for many returns of just such days of pleasure wherein they might again take part and meet with those same friends.

The table-linen that graced the board that day had never cost its pretty little owner more than fifty cents a yard, and it had been used to a considerable extent for more than two years. "Mine" host and hostess were young married people, and the village maiden who had chosen a farmer boy for her husband had known little of the meaning of "getting along" after the manner of ways that come under the heading of economics until, to prove herself a veritable helpmate, she had taught herself the wisdom and the necessity of practising care and economy, and had found for herself also the truly genuine pleasure of so doing when, by thrift and management, one is encouraging and assisting the one who has grown to be the dearest on earth.

This new housekeeper friend had become by dint of home-training and an inborn ability a model housewife and home-maker. She had also been taught from childhood the import and value of cordiality and hospitality, and she had early learned that the world over "the crust of bread and the cup of tea proffered with a spirit of friendliness" and genuine kindness and welcome were much more acceptable and a truer heart-gift than a feast and a king's royalty given in the name of splendor and devoid of any genuineness, but only offered for show or to pay a debt.

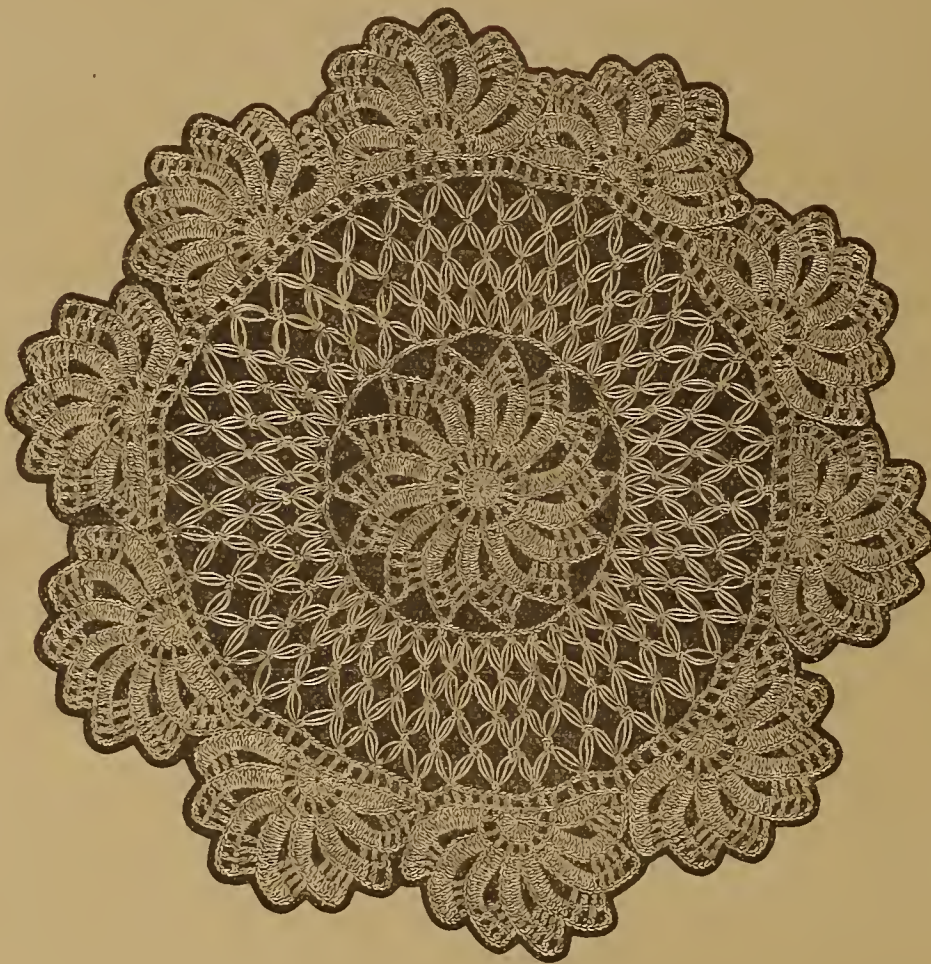
Daintily and understandingly done laundering had made that simple cloth and the napkins quite beautiful, and the pretty set of semi-porcelain dishes, the few pieces of simple but very pretty glassware, the silver spoons, and knives and forks that had been a part of the commencement of their house-keeping, furnished a table pleasant to see. The window-garden of potted plants had given up their blossoms and greenery to the forming of a more tastily set table. And how the farm had that year (as in all other years before and since that day) yielded of the fruits of the soil toward the setting forth of a dinner that no one could look upon with scorn or with other than a keen appetite, whetted by the sights of "good things to eat," of which, it is said, it takes so great an abundance and of so excellent a quality to "find the way to a man's heart."

I shall not dwell upon or give receipts for the preparing of "dishes" for Thanksgiving dinners. Some one perhaps more competent than myself will attend to all that. But I shall never forget the date pies that called forth so many remarks of praise and inquiry, and I wish that every reader of these remarks might taste of just such pies for once at least: for of all the concoctions of deliciousness and delicacy I think that nothing could quite compare with those Thanksgiving date pies. I have made them since, and I shall make them again. And I am almost as sure that a Thanksgiving cannot be a "truly for surely" Thanksgiving without date pies for the dinner than it could be without cranberry sauce and turkey.

But our dinner that day was not a turkey dinner. Baked young chickens took the place of the turkey, for our new housekeeper had not at that time

become an expert at turkey-raising, though she had done very nicely at chick-rearing. She has since become not only a "turkey queen," but a very creditable success as a turkey-raiser and a provider of fine twenty-five and thirty pound turkeys for other people's Thanksgiving dinners (for a moneyed consideration, of course).

But those baked fowls were in truth "done to a turn," and those date pies! They were very inexpensive, too. For had not the Jersey cows absolutely given the rich milk that was almost solid cream for the making? And had not the hens contributed eggs in plenty? And aside from the eggs and milk but little had been required except the dates and the labor. A little more than half a pound of dates was required for a pie (and there were four large pies ready for dinner, and nearly all were consumed). The dates were soaked in sweet, new whole milk until very tender, and stood simmering, but



not boiling, on the back of the stove for nearly an hour before being baked into pie form. The milk and date-pulp mixture was pressed through a colander and enough more milk added to fill the pastry-lined pie-tins as custard or pumpkin pies when they were baked. They required no sugar. Dates are sweet enough without additional sugar. When baked they were deeply covered with a "whip" made from the frothed whites of eggs sweetened to taste and returned to the oven to brown and "set" the "whip."

The guests of the day were people who, in accord with President Lincoln, did not believe in celebrating Thanksgiving day or any other day with solemn faces and funereal manner. Games were indulged in, pleasant stories told, experiences talked over, and helpful hints passed around, and the hours fairly flew, as pleasantly spent hours have such a fashion for doing. And though luxuries and wealth formed no part of the lives of our entertainers, no guest was there but enjoyed to the fullest every hour and every moment of the time there given, or returned home without having felt an assurance that in every life there is something to be truly thankful for, and so thoroughly thankful that it were a crime and a sin to say, as so many have been heard to say, "Why should I participate in Thanksgiving festivities or even attempt to 'give thanks'?" For what have I to be thankful for?"

The quotation is too true that we so often forget, when temptation surrounds us, The prayer of thanksgiving, the trust-note of joy.

Among us all there are none who have not something to be especially thankful for, some reason to remember our Creator with thanksgiving and praise. The majority among us, though not possessed of wealth, have of supplies so bounteous a store that we can, if we will, give with tender heart and kindly hand some portion that shall help to make the lives of others a little more pleasant and a little less poverty-burdensome because of the gifts that through him we are able to bestow.

1

DOILY

ABBREVIATIONS.—Ch, chain; tr, treble; s c, single crochet; st, stitch.

First row—Ch 4; join.

Second row—Ch 3, 15 tr in ring.

Third row—Ch 5, * tr in tr, ch 2; repeat.

Fourth row—Ch 10, tr in fourth ch, tr in each ch, join with s c in second tr of center, turn. * ch 9, tr in fourth tr from end, * ch 1, tr on tr, repeat from second * twice, turn, ch 5, * tr on tr, ch 2, repeat from third * twice, 8 tr in space, join with s c to center, repeat from first * around entire center.

Fifth row—Join thread at top of point, * ch 9, s c in top of second point; repeat.

Sixth row—* Draw out 2 loops of knot st, fasten with s c in fifth ch of loop, draw out 2 more loops, fasten with s c in top of point; repeat.

Seventh, eighth, ninth and tenth rows—All in knot st.

THE BORDER.—This is formed of ten half-wheels like the center and sewed into place.

First row—Ch 4; join.

Second row—Ch 3, 8 tr in ring; turn.

Third row—Ch 5, tr in tr, * ch 2, tr in tr; repeat.

Fourth row—Same as fourth row of center.

MRS. J. M. HILL.

2

THE FATHER'S DUTY TO HIS CHILDREN

We hear a great deal at the present time about the duties and responsibilities of motherhood, and mothers have been so praised and blamed, so lectured and paraded before the public, that it is small wonder that the father begins to feel that when he has seen to it that his children are clothed and fed and provided with a comfortable home he has fulfilled all his parental obligations, and that upon the mother devolves the whole duty of training the children to a useful and honorable manhood and womanhood.

We have our mothers' congresses and our mothers' clubs and our mothers' meetings for child-study, but never a

congress, a club or a convention for the purpose of impressing upon the mind of mankind the fact that as fathers they have assumed duties and responsibilities which they have no moral right to ignore.

Many men seem to think that because they are the bread-winners is sufficient excuse for ignoring their rightful share of parental responsibility. But the mother is also the home-maker, and aside from the care of children the duties of the home-maker and housekeeper are many; the father cannot fulfill a mother's obligations, neither can a mother perform a father's duty to his children.

Of necessity the care and training of very young children must devolve upon the mother. She has many burdens to bear which a father cannot share and can only lighten with his love and sympathy. But the husband and father should see to it that all the care and anxiety and the responsibility of the rearing and training of his children is not packed up in a burden and laid upon the shoulders of the wife and mother. A father should consider the rearing and training of his children as his most important and sacred duty. He should impress it upon their young minds that he is not only the father to whom they owe respect and obedience, but that he is a friend who loves them and who is worthy of all their love and honor.

A father should make friends of his children, gain their love and confidence and make them understand that he has their best interests at heart and is in sympathy with all that pertains to their happiness and well-being. If sometimes he finds in his offsprings some very peculiar traits of character, he would do well to institute a rigid self-examination and see if the laws of heredity do not increase his own responsibility. Then let him remember that "like as a father pitieth his children," and that will sanctify the relationship and create a closer bond of sympathy between them.

A son may love his mother dearly, but he will follow the example and walk in the footsteps of his father. If the father sets before his children an example of honesty and integrity, of gentleness and courtesy, a pure life and an honorable and upright manhood, he may rest assured that his sons will be very likely to emulate his example and be a staff to his old age and a comfort to his declining years.

The mother should not be expected to represent the Christian principles of the family. The father should go to church with his children, and inculcate into their young minds a love and reverence for Christianity in the best and highest sense of the word. The father should also be mindful of the welfare of his daughters, for there are times when a father's counsel and advice will have even more weight with the daughter than that of the mother, especially if he has taken pains to win her confidence and her love.

We are told that love is the greatest thing in the world; and where there is mutual love between a father and his children all questions of domestic economy will be discussed kindly and amicably and with none of the rancor and discord that is sure to arise where the children regard the father as a sort of domestic tyrant, who has no claim upon their affections or their considerations.

I know many men who are the most exemplary fathers with regard to their duty to their children, and I do believe that the frequent neglect of parental duty is more often due to carelessness, and an implicit confidence in the ability of the mother than to a lack of interest in his children or a desire to impose additional burdens upon the mother of his children. Then, too, there are the privileges and the pleasures of fatherhood, and fathers will do well to remember that they are not only shirking a sacred obligation, but that they are missing their rightful share of the sweetness and joy and soul-satisfying love and affection of domestic life when for any reason they fail to assume their share of the duties and responsibilities of rearing and training their sons and daughters to a useful and honorable manhood and womanhood.

MRS. CLARKE-HARDY.

CAPTURING COLORS

BY J. E. M. RALEY

First the baby's bonny eyes
Took the color of the skies;
Then his little dimpled toes
Took the color of the rose;
But he never seemed so sweet
Till his little naked feet
Wandered out across the lawn
And caught the color of the street.

RECREATIVE WORK

“Are you going around the campus this morning?” asked Grandma, looking at Anna Junior's wheel much as if she had a mind to try it herself.

“I wasn't, but I will. What can I do for you?”

“Do you know a mulberry-tree when you see it?”

“Well, Grandma, do you think ‘much learning’ has turned my head, or have mulberry-trees changed their nature since I was a barefooted youngster? I flatter myself that I know a horse from a cow, and a mulberry-tree from a blackberry-bush.”

Grandma laughed, for she knew that Anna was every inch a country girl still, and only wanted to tease her.

“But what of it?” she asked. “What if I do know a mulberry-tree, and what if I do ride around the campus? At your service, madam, with the fastest steed on record. What can I do for you?”

“Your Aunt Anna is in the midst of her annual attack of the budding fever, and wants some buds from the English mulberry that grows just beyond the campus.”

At this juncture Aunt Anna herself appeared and explained more fully what she wanted.

“Get me some healthy young branches that have well-formed buds at the base of the leaves.”

“What will you bud them onto?”

“Have you seen my seedling mulberry-tree? It came up in the lawn two years ago. I recognized it, protected it from the scythe and lawnmower, and now it is over five feet high and very thrifty. It is the staminate variety, bearing no fruit, and I want to bud it with the female variety of that ever-bearing English mulberry.”

“The world moves. Think of Auntie and Grandma starting a mulberry-ranch, when I well remember the days of old when I was instructed in all the evil effects of eating mulberries.”

Said Grandma, “You are jumping at conclusions. Anna, explain to her.”

“Well, I notice that the English mulberry begins to ripen early in the summer, but the berries do not ripen all at once. They keep falling as they mature, and since I notice birds make very free with them from the tree-tops I am inclined to believe that my fine flock of Plymouth Rock hens would find them quite as appetizing. Moreover, my dear, even though you sacrifice your precious time to bring me the buds, do not let me catch you eating my mulberries in future years!”

“Aunt Anna, you are a genius. Should you ever be stranded on a desert isle your resources will far exceed Robinson Crusoe. If I bring you the buds I ask as pay that you teach me how to bud.”

“Agreed!” And off went Anna Junior, returning in a short time with a handful of healthy twigs.

Aunt Anna then took a small pen-knife with the blade rather blunt at the end, and a number of narrow strips of old muslin a third of an inch wide and a foot or more long, and taking her niece went to the seedling mulberry-tree. She selected a healthy branch on the growing tree, and in a smooth part of the bark not far from the base of the limb made two crosswise incisions, and with her knife-point gently loosened the bark at the points of intersection. Then from the twig her niece had brought she carefully cut a bud, leaving the leaf-stalk as a handle to work by, and sufficient bark to prevent any injury to the bud. Taking this in one hand and lifting the bark at the point of intersection on the branch of the tree she slipped the bud under and tied it securely, but in a knot easily untied. She then bound muslin strips both above and below, to hold the bud firmly in place.

“In ten days,” said she, “I will loosen the strip if the bud is set.”

“If not set, what then?”

“It will not grow at all, and I must try again.”

Anna Junior was greatly interested and tried it for herself. The result was satisfactory.

“Will it grow this year?” she asked.

“No; but next spring I will prune the branch back almost to the bud, so that the sap will go to the new growth. Under favorable circumstances it should grow several feet next year.”

“I cannot understand how that tiny bud can retain its characteristics. Why doesn't it grow into a branch like the seedling tree? It draws its nourishment from the same sap.”

Aunt Anna laughed. “Ask me something easy. Nature's laws are like the old rule for cube root, which you never understood until you studied higher mathematics.”

“Nor even then!” interrupted Anna Junior.

“But you followed the rule and obtained results. So with budding, grafting, slipping, and, indeed, nature's ordinary methods of reproduction. The process is quite too marvelous for our understanding, but we can humbly obey her laws, make the conditions right, and leave the growing to her. We have budded six English mulberry-buds onto a seedling tree. Save for a little watchfulness our part is done.”

“Why didn't you do it in the spring?”

“Were next year's buds formed then?”

“I see. And can you bud any time after they are formed?”

“Only while the bark slips.”

“Doesn't it always slip?”

“Try it and see! You have touched upon an interesting subject for investigation, and I will answer no more questions until you have observed this bark matter for yourself and have watched the knitting process of the buds you have already inserted.”

BERTHA KNOWLTON.

TATTED WHEEL-LACE

Begin the wheel by making a ring of 1 d (double) and 24 p (picot), close. Make each p nearly one fourth of an inch long. Fasten a second thread in the last three p together, and * make a chain of 6 d, then a ring of 10 d, 1 p, 1 d; near to this ring make one of 1 d, 1 p, 10 d. Now make another chain of 6 d and join to the next 3 p of center ring; repeat from * seven times. The next row of chains consists of 3 d, 7 p separated by 1 d, 3 d. Join each chain to two small rings of preceding row, taking the 2 p together. Join a straight line of wheels by 2 chains for the top row,



then join one under 2, missing the space between the next 2; this forms a point. For the heading make rings of 4 d, 3 p, with 4 d between each, 4 d; make the chains of 6 d. Join the rings to one another and to the wheels as seen in the illustration. These wheels may be joined for yokes, children's bonnets, tidies, etc. The lace makes a lovely finish for scarf-ends and for other purposes, which will suggest themselves to the ingenious worker.

MRS. J. R. MACKINTOSH.

BOOKS TO CHEER THE CHRISTMAS HEARTH

“Christmas and New-Year's in Germany in Views Afoot,” Bayard Taylor; “A Christmas Child: A Jewish Legend,” Molesworth; “Story of

the Other Wise Men,” Vandyke; “Christmas Around the Yule-Log; Christmas in Norway,” Bjornsen; “Holiday Stories,” Baker; “Christmas in Four Quarters of the Globe,” Barber; “When Life is Young,” “Rhymes and Jingles” and “Hans Brinker: A Story of Christmas in Holland,” Mary Mapes Dodge; “Santa Claus on a Lark,” Gladden; “Christmas Eve and Christmas Day” and “In His Name,” E. E. Hale; “Other Times and Other Seasons,” Hutton; “Sketch-Book,” Irving; “Little John's Christmas, in Rhymes of Childhood,” Riley; “Bird's Christmas Carol” and “Child's Christ Tales,” Kate Douglas Wiggin; “Christmas Stories in New England Nun,” Wilkins; “Christmas Peace in Village Sermons,” Kingsley; “Twelve Christmas Sermons,” Spurgeon; “Hymn to the Nativity,” Milton; “Christmas at Greycastle.”

Other books entertaining and helpful are “Five-Minute Stories,” Richards; “Mice at Play,” Neil; “Faith Gartney's Girlhood,” Whitney; “Deephaven,” Sarah Orne Jewett; “What's Mine is Mine,” McDonald; “The Scandal of Tillyloss,” Barrie; “Afterwhiles,” Riley; “Letters of Eugene Field,” “American Literature,” Julian Hawthorne; “Studies for Letters,” Callaway; “The Red Fairy Book,” “The Blue Fairy Book,” “Pictres and Verses,” Peter Newell.

Attractive nature-books and stories of animals are “Birds and Poets,” Burroughs; “Nature-Pictures by American Poets,” “The Bee People,” Morley; “Familiar Flowers of Field and Garden,” F. Schnyder Matthews; “Our Native Birds, and How to Attract Them to Our Homes,” Lange; “Cat Stories,” Helen Hunt; “Theo and Hugo,” Mary B. Willys; “The Trail of the Sand Hill Stag,” Seton Thompson; “Black Beauty,” “Beautiful Joe,” “For Pity's Sake,” By addressing “Our Dumb Animals,” Boston, Mass., “Black Beauty” may be procured for six cents, and “For Pity's Sake” for ten cents.

MARGARET MOORE.

A PLEA FOR THE CHRISTMAS TREE

It was at the last “mothers' meeting” before the holidays that the subject of old-time belief in Santa Claus and the joys of the Christmas tree came up for discussion; and while the pros and cons of the Santa Claus myth were also of interest, the plea for the Christmas tree found many responsive advocates, for it was a subject seldom discussed.

“Don't, don't substitute any new-fashioned fandango for the dear old-fashioned Christmas tree,” said one of the enthusiastic mothers. “There is nothing new-style about Christmas. It is very close onto nineteen hundred years old, and, to be biblical, don't try to patch this old festival garment with new cloth. It won't make a satisfactory job.”

What is the trouble? Are we more lazy or selfish than were our mothers and grandmothers before us? We have rich memories of Christmas in the past, and now we complain that “the times have changed, the holiday spirit is not in the season as it was.” Lots of women systematically talk down the tree to their children until, poor little defrauded things, they quote their blase mothers and say, “Oh, we don't care for a tree. They are not pretty,” and then on and after December 25th they will live at a neighbor's where there is a tree, and look greedily in through windows where a glimpse of the blessed old evergreen, dressed in proper costume, to be Santa Claus' bride, may be seen. It is all a horrid lazy farce. The children do want a tree all candles, or, if may be, filled with glittering electric lights. They want it bending under the weight of gifts tied to the strong boughs and positively giddy with all the lovely decorations that our shops have provided for this very thing. They want, as a final touch, clouds of tinsel-shaving spangling the green boughs, as though Santa Claus was a huge spider and had wrapped the tree in a web of gold and silver. The children want this. They need it, and why are so many people ready to rob them?

There are huge car-loads of the forest-trees rolling toward as you read this little plea, and there are eager purchasers ready to choose the best; but why are not all the parents going to buy?

“Oh, it is such a bother, and I have no place,” says one. “It costs too much,” or “I have talked the children out of it. They really don't care. I've promised to take them to see their cousin's,” or “It makes such a dirt, and things look so forlorn when it has to go that I shan't have any,” etc. Now, all this simply means that you are selfish and lazy. They don't make the dirt that is found after a jolly little card-party, where the men smoke and you have tea and cakes. There is not much more cost, either. It is nothing like the trouble of a progressive euchre, nor the expense, and every one has the room if they wish to use it. No; the only real excuse is that your childhood is over, and you do not sympathize with the present children.

Have a tree. Do have a tree, for the sake of everybody. You will be repaid yourself. Can't you remember how you used to crowd around the door and see the light through the crack and the keyhole, and then when the tree was lit up and you all went in? Oh, that smell of pine and wax candles and the angels just going to fly through the ceiling! Silly, was it? Most joys are silly if analyzed in cold blood. Why not let the children have the silly, lasting joy of a Christmas tree that will dazzle them? Burn into their hearts and memory the gay, festive side of the holiday season, and make Christmas as no other day in the year. Why cheat them? They need not realize that it is an added expense. Don't let them.

Have a tree. It need cost but a trifle, or it may be gorgeous with all the wealth of trimmings that will make its concoction easy for you. If you can, buy its decking; if you cannot, invent them and get the children to help, but have a tree, a real Christmas tree, on Christmas day.

Then whether the “Santa Claus myth” (against which so many are needlessly plying their arguments) finds enthusiastic believers in the home, or whether the children have outgrown this dearly prized belief of childhood, there will be one all-delightful center—the gorgeous Christmas tree—where the entire family may expend their holiday enthusiasm. And the goodwill spirit of the season will enter the home where the Christmas tree is found.

P. W. HUMPHREYS.

CHOICE CHICKEN DISHES

Monotony is the great bane of cookery. Fight shy of it. During the fall season, when chickens are at their best as well as the least expensive, get out of the old ruts of boil, fricassee and plain pie and test the method here given:

PANNED CHICKEN.—Select a chicken weighing about three and one half pounds; split it down the center of the back, and wipe thoroughly with a soft cloth wrung from cold water; break the breast-bone, turn back the wings and flatten the chicken. Butter a large baking-pan, rub the chicken with soft butter, dust with salt and pepper, and rub with sifted bread-crumbs; lay in the pan inside down, pour half a cupful of salted boiling water in the bottom of the pan, cover, and cook in a hot oven for fifty minutes; remove the cover, add a few bits of butter, a dusting of salt and pepper, and bake thirty minutes longer, basting every ten minutes. When the chicken is browned put one heaping tablespoonful of butter over the fire with one tablespoonful of flour, and brown; remove the chicken onto a serving-platter, pour liquor from the pan, add half a cupful or more of boiling water, and stir constantly until it boils smooth. Add the giblets boiled and chopped fine and one teaspoonful of lemon-juice, pour over the chicken, and serve hot garnished with bread roulettes or sliced cold boiled eggs.

BREAD ROULETTES.—Soak one cupful of coarse, stale bread-crumbs in half a cupful of milk for twenty minutes; to one egg add one teaspoonful of minced parsley or celery-tips, a pinch of salt and a dash of pepper, and beat slightly; drain the crumbs, mix with egg, form into small balls, crumb, egg and crumb, brown in hot fat, and drain on Manila paper.

K. B. J.

[HOUSEHOLD CONCLUDED ON PAGE 19]



AN ALABAMA YANKEE

By Francis Lynde

CHAPTER III.

A RECONNAISSANCE



HE man in the dusty uniform barring the way for Alan and Mary leaned on his gun and chuckled jocosely.

"Didn't know I was here, did you, little folks? What you got in that basket?"

"Bread and meat," said Alan, tersely; and then, without taking his eyes from the dusty one, "Mary, grab it and run! I won't let him hurt you!"

Mary picked up the basket and obeyed as coolly as if the command had been a request to pass the bread at table; and the soldier laughed and let her go.

"Trot right along, little one. Don't know but I'd stop ye if I dared; but if I did, this here fire-eatin' brother of your'n 'd—"

He broke off abruptly and brushed Alan aside. There was a thunder of hoofs in the air, and a small whirlwind of dust came tearing down the road. The soldier waited only long enough to get a glimpse of the colors carried by the oncoming squadron.

"Run, you chickens! Take to the woods!" he shouted; and in the halving of a second he had fired his musket into the thick of the whirlwind and disappeared.

The small provision convoy came near having the worst of it. Mary was a little ahead, tugging the basket, and by the time Alan overtook her the galloping troop was almost upon them. Escape to the right was cut off by the steep mountain-side, and to the left the wood was bristling with the bayonets of an advancing skirmish-line.

Alan was flying at top speed when he caught up with Mary. Without missing a stride in the breath-cutting race he tucked her under one arm, snatched the basket with his free hand, and ran on, with the thundering hoofs reaching for him at every bound. It was only a few rods to the mouth of the cave and safety. The entrance to Nick-a-jack is partly filled by a huge mound of rock and earth which has fallen from the upper lip of its misshapen mouth, and down the inner slope of this they rolled—boy, girl and basket—to an accompaniment of spattering shots from without. Alan was still gripping Mary and the basket when his father picked him up and said:

"Alan, lad, are you hurt? Either of you?"

Alan shook his head. He had no breath for speech. Mary wriggled herself free and began to pick up the scattered provisions as calmly as if the Civil War were of small importance compared with the loss of her father's supper.

The spattering shots came thicker, and there were cheers and yells, as of charge and countercharge. The refugee climbed cautiously to the entrance, with Alan a close second. From the corner of the misshapen mouth they could look out upon the fight.

It was what the war-correspondents call "an affair of outposts." A reconnoitering party of Confederates had gone too far and was entangled in the Federal skirmish-line. When Alan got his first glimpse the scouting-party was fairly surrounded; the men were off their horses and fighting from behind anything that would cover them.

Alan got that far in the summing up of it, and then he forgot which side he was on and his heart began to swell with sympathy for the outnumbered handful of cavalymen.

"They'll be killed—every last one of 'em!" he whispered to his father, between the volleys. And an echoing half minute later, "Oh, Jiminy! why don't they charge?"

There wasn't any "why" except that the lieutenant in command of the entrapped ones was waiting for an opening. It came presently, or he thought it did, and at the word of command a wedge-shaped column in gray hurled itself against the center of the contracting semicircle.

Alan saw the thin point of the wedge fuse and melt in the jets of fire converging upon it, and realized in some vague fashion that the melting meant woundings and death. But the shouts and cries, the wild strife and the clamor of it seemed to get into his blood, and he was conscious of nothing so much as a fierce eagerness to be in and of it.

The brave dash failed. In the midst of it the flying wedge stopped, wavered, fell apart, and the fragments were swept back into the road. Alan looked to see the cover-fighting resumed, but it was not. In the gathering dusk there was a movement among the riderless horses, a wild stampede of them down the road, more spattering volleys, with the flashes of the guns beginning to show red in the twilight, and then Alan stared and rubbed his eyes and stared again. The Confederates were falling back upon the cave!

Alan's first thought was for Mary; but when he would have sprung up a strong arm pinned him down.

"Lie still, lad!" was the whispered command; and at that Alan saw that Mary was

squeezed in behind his father. A rhododendron grew out of a crevice in the overhanging rock, and Stephen Joyce hent it down until its foliage screened them.

The retreating cavalymen darted into the cavern one by one, and Joyce's fear was that they would make a stand and so transfer the fight to the cave. But the fear proved groundless. The men gathered in the hollow hack of the mound, a pine-torch was lighted, and they pushed on into the gloomy depths.

Alan's gaze followed the silent figures dimly outlined under the smoky flare of the torch until they disappeared; watched until the torch itself dwindled to a mere point of light and vanished in the blackness, and was far enough from suspecting that he had seen the last that was ever to be seen of the brave remnant. For so far as history and the Confederate records may be believed no survivor of the vanishing remnant was ever seen again.

While the victors on the field were caring for the wounded Stephen Joyce deemed it prudent to remain in hiding. Loyal as he was, he was tinged with the Southerner's distrust of the Northern soldiery. "Lincoln's hirelings" they were called, and every Southern country-side rang with fictions of their rapacity and cruelty.

Joyce believed the fictions as little as might be, since his own son fought with the invaders; but the lingering prejudice made him cautious.

"They're all gone now," said Alan, finally. "Haden't you better eat your supper?"



TWO BAYONETS STOPPED THE WAY

The refugee found the basket, and ate while he listened to Alan's story of the day's happenings.

"There has been no word from Robert, then?" he asked, when Alan had told all he knew.

"No; no word from anybody except old Jasp Garth. He was over this morning and said he wanted to see you. I told him you didn't want to see him."

"That was true enough, laddie; true enough. But it was one of those true things that needn't be cried from the housetop."

The small one put in her word. "Uncle Jasp looked ter'ly sorry about something."

Stephen Joyce was silent for a time. Then he said, more to himself than to his children, "The day of retribution has come, and he is beginning to know what it is to be helpless in the face of the enemy. Perhaps he realizes now that I might have stood between him and the Lincoln men."

"But, father, you won't do it, will you?" said Alan, quickly.

The old mountaineer put the remnants of his supper back in the basket, and Alan waited long for his answer.

"That's a hard question, son. If you had asked it yesterday, before he had betrayed us to Seth Byers—but now I don't know. It's only just that he should suffer a little of the chastisement he has tried to bring upon others."

Alan thought of the twice-harried home farm, with its empty cow-yard and barn, and took a vindictive oil for his father's hesitant inch of righteous indignation. You see, there was only one generation between him and the unforgiving grandfather who "paid his debts."

"I hope they'll take everything he has, down to the last chicken and the handful of corn that he was going to feed it with. I—What's that?"

"That" was a sound much like a groan.

Stephen Joyce ran out to where the moon was printing marvelous leaf-traceries of black on white in the road, and came back carrying a wounded man in his arms.

"It's one of the wounded that they missed," he said. "Bring the basket and the torch and come on down to the ice-box."

The Nick-a-jack "ice-box" is a pit-like chamber a few yards from the entrance, in which a cold spring lowers the temperature to grateful coolness. Alan lighted the pitch-torch, and by the flare of it recognized the smoke-begrimed face of the wounded one.

"Why, it's the Yankee soldier that stopped us out there in the road!" he exclaimed; and just then the soldier sat up and stared about.

"Got me, haven't you?" he said, with a grin that ended in a wince of pain. "Which is it, Andersonville or Libby?"

Joyce was examining the bullet-score in the man's scalp by the light of the torch.

"It's neither this time; you've fallen among friends. Are you hit anywhere else?"

The soldier felt himself all over, as if the answer depended upon the sense of finger-touch.

"Guess not. Why, hello! here are you two chickens with the basket! Who are you folks, anyhow?"

"We're 'Alabama Yankees,'" said Alan. The soldier's jocosity was contagious.

"That so? Well, I'm an Illinois Yankee; guess there ain't so very much difference. Got anything left to eat in that basket?"

They set the remnants of the supper before him, and he ate like the famished man-at-arms the world over, answering their questions between mouthfuls. It was thus that they learned of the probable advance of McCook's corps over the mountain.

"Thank God for that!" said Stephen Joyce, fervently. "I can go home now! I have a son with General McCook!"

"You don't say! Live up on top o' the mountain, do you? Well, you're safe enough to go home. The boys ought to be all round you by this time. And I would go if I was

"Oh, Stephen! what are you going to do?" she asked.

"Hester, wife, this house is about all we have left, except the bit of money. If we can hold it a little longer it will be safe inside the Federal lines. Alan and I will stay and defend it."

"You'll be killed, both of you!" the mother sobbed; but Alan's heart leaped up within him, and he lifted the loose board which concealed the precious rifles and ammunition—things long since declared contraband of war by military decree.

Twenty minutes later a small procession of three, headed by the old negro, left the house. Stephen Joyce watched it until it was safely across the road. Then he shut the door and harred it.

"Go you and lie down, Alan, and I'll keep watch. I've had some sleep to-day, and I dare say you haven't. I'll call you when the time comes."

To this Alan demurred, and in the protesting fell asleep in his chair. When he awoke the morning sun was shining in at the windows, and his mother and sister were getting breakfast at the fireplace.

"Well, I declare!" he said, rubbing his eyes. "I—I do believe I've been asleep."

Mary laughed.

"I never did see anybody sleep so sound. Father opened the shutters, bang! a long time ago, and you never winked."

That was the beginning of an eventful day. There had been no raid, no rounds of the patrol, nothing to disturb the night-long vigil of the loyalist. But early in the forenoon a change came. In a single hour the crest road became a thoroughfare. Before dinner-time stragglers from the Confederate camps below Bridgeport began to pass—men on foot, men on horses, and wagon-loads of terrified women and children, all hurrying eastward out of the path of the advancing army.

At the farm-house all was bustle and activity. All through that day of confusion the Joyces kept open house for every hungry soul that asked, and there were scores of them. In midafternoon a lull came, and one of the fed stragglers paid his score with a report that the advancing army had changed its route; that it was crossing farther down the mountain.

This report was borne out by the lull. It was as if the farm-house had been left in an eddy between the opposing forces. This was the one thing Stephen Joyce dreaded most—the possibility of being left in the unprotected middle ground; and at four o'clock he sent Alan out for news.

Alan's instructions were general. He was to confirm or disprove the report if he could; and if it were true, he was to try to find his brother and bring help. Accordingly, he went westward, cutting across the fields to save distance, and coming out in a thicket of cedars just beyond the Garth orchard.

In the densest part of the thicket a horse was tethered, and from the road near by came the sound of voices in earnest conference. Alan parted the branches and looked. There were two speakers—Jasper Garth and a man whom he did not recognize, though his voice was oddly familiar.

"I tell you, Elisha, it's going to be done to-night. This is Seth's last chance. He was scared off last night by the reports from the front, but if any one can get word to him of this change of route he'll do it to-night."

Thus the family enemy, and Alan's heart became as flint. To think that they would stand there in the public road and deliberately plot his father's undoing!

"It's purty toler'ble resky—for me—Mr. Garth," said the other.

"I know; but you must be true to your colors now, if you never are again. Confound that boy of Joyce's! If he hadn't been so spiteful yesterday morning—but he'll get his pay. You ride back through the woods, Elisha, and watch the place, and I'll go scout around and see if I can't find the Captain. If I can get word to him that will settle it."

They separated at that, the unknown one mounting to ride eastward, and Garth hobbling through the forest in the opposite direction.

Alan promptly followed the enemy, and was led a chase that seemed to have no promise of coming to an end. Back and forth the lame one went, now hiding in the bushes, and again making a wide detour around some invisible obstruction, and after a time Alan decided that he was trying to dodge the Federal pickets and run the lines.

"That means that the 'Captain,' as he calls him, is hid out somewhere beyond the lines," he reasoned. "I only hope our pickets will catch up with old Jasp!"

The vengeful wish was hardly uttered before it was granted. The sun was well down in the west, and the long shadows of the pines were beginning to darken the hollows, when the old man stopped at the edge of a shallow ravine. The forest was open on all sides, but there was a tangle of holly in the lowest part of the depression, with a thread of a brook.

Garth seemed to be of two minds, whether to go around the ravine or to cross it. He decided upon the latter course, and Alan closed the gap between them to a few yards by darting Indian-wise from tree to tree.

The lame man went cautiously down the slope, either from his infirmity or in uncertainty as to what the holly tangle might conceal; but his caution was unavailing. At the margin of the little brook three men in dusty blue uprose out of the holly, and two bayonets stopped the way. One of the dusty ones—a lieutenant by his shoulder-straps—scrutinized his prisoner sharply.

"Your name is Garth, isn't it?" he demanded.

The lame man made a sign of assent.

"I thought as much. You've saved us the trouble of going after you."

The old man's lips were dry, and he had to moisten them before he could say, "After me? What do you want of me?"

The lieutenant signed to his men to close in and search the prisoner.

"You kuow well enough what we want of you. We hang bushwhackers—and those who harbor them. Take him in, Donovan, and report to the Colonel."

[TO BE CONTINUED]

WHEN THE WORLD IS YOUNG, LAD

When all the world is young, lad,
And all the trees are green;
And every goose a swan, lad,
And every lass a queen;
Then hey for boot and horse, lad,
And round the world away:
Young blood must have its course, lad,
And every dog his day.

When all the world is old, lad,
And all the trees are brown;
And all the sport is stale, lad,
And all the wheels run down;
Creep home and take your place there,
The spent and maimed among;
God grant you find one face there
You loved when all was young.
—Charles Kingsley.

THANKSGIVING IN A CABIN

BY WILL ALLEN DROMGOOLE



Us' thing anybody know Thanksgiving in' all be comin' long here; en den what?"

The speaker—an old man, a negro—a bundle in one hand, a staff in the other, was trudging wearily through a frost-stripped, disconsolate-looking Southern forest.

Through the denuded trees, rattling their bare branches over his head, he could see the brown cotton-fields, even more disconsolate-looking, with the stalks of the preceding year shaking dismally in the November wind. The autumn rains had washed gullies that were almost trenches down the long furrows, telling all too plainly the long absence of the plow and of that care necessary to the preservation of even the best of fields.

But no whit more forlorn the old brier-bordered field than the ragged old pilgrim tramping disconsolately the forest foot-path. Though, to be sure, his body, while spare, was erect, his head was like snow, his eye keen and searching. And although his clothes hung upon him in tatters, through which the satiny skin showed when the wind caught them in its grasp, they were, or had been, of the finest broadcloth; and their owner carried himself with a dignity, a consciousness of superiority to appearances, that despair had failed to subdue.

He kept his face constantly to the cotton-field. There ought to be a foot-path running somewhere along those sunken furrows. He was searching for it eagerly, listening the while to every crack and crackle and sound of the forest, after the manner of one running from danger. Once a squirrel went frisking down the path before him, and he drew himself up with sudden wrath.

"Look a-dar!" he exclaimed. "Look at dat! Scootin' round here enj'yin' yo'self, is yer, en me not hed a bite but a col' hoe-eake, not sence night befo' las'?"

The injustice of it appealed to him strongly for an instant, but only for an instant. "But den," he went on, with that gentleness which is born of want, "I reckon yon's one o' God's creatures. En"—with sudden pathos—"so is I. So is I; en look at me!"

There was a sparkle, a sudden glisten of a tear that hung trembling upon the furrowed old cheek, and with determination in every movement he turned again toward the cotton-field and pointed with his staff.

"De house orter be right ober dar, in dat clump o' cedars, en dar orter be de public road on tudder side o' it, 'cause dis de back side. But dar ought to be a Lombuddy poplar 'mongst dem cedars, 'cause I he'p'nt it dar. En de stile ter de woods lot, hit orter be right 'long here, 'cause I crossed it a million times o' I crossed it once. But it ain't here. Lord a massy, ef I ain't done gone en los' myse'f' right here et home. En hit's mos' night. Waal, sah, Thanksgiving' gwine find ol' Joe frez ter def et somebody don't mind. But thank de Lord, hit'll be on de road home, en not at dat udder place. Ef it find me daid it gwine find me respect'ful daid; thank God fur his mercy."

The sharp, reverberant sound of a dog's barking fell upon his ear, and he stopped to listen. It came from the direction of the cedars. At the same moment he saw—or it might have been a part of the evening's haze—a thin blue line of smoke curling invitingly

upward. The old black face broke into one broad beam of light.

"Ki, yi! Ain't I done tol' yon I know de way home. I wonder what dey done wid dat Lombuddy poplar. Me en ol' marster set it out fifty year ago. En de triflin' niggers done broke de stile down, en dese here fences ain't fitt'n ter look at. Wouldn't keep a cow out, still less'n a mule. Rotten ez de dirt, en clean gone in some places. Land o' Moses! who is keepin' up dis here plantation? Las' year's jimson-weeds bigger'n a man ef dey is daid."

With the certainty of one familiar with his surroundings he stepped over the low, tumbling rail fence and struck straight across the field for the clump of trees among which a commodious plantation-house had once gleamed like white marble among the everlasting greens. It had been the home of his former master. A tall white shaft in a tangle of shivering gray weeds just beyond the old mistress' flower-garden told his name:

"William Harrison, born in Brunswick county, Virginia—" The green mold blotted out the year and day, but below the mold the date and place of his death might still be traced. "December 25, 1860, in Rutherford county, Tennessee."

The black pilgrim stopped a moment to lean upon the low iron fence of the burying-ground and look down upon the neglected graves which it inclosed. The dignity that had marked his carriage seemed to increase tenfold as he gave vent to his indignation.

"Whar's all de lazy niggers gone," he exclaimed, "dat dey let ol' marster's grave git all snnk in weeds dis here way? En Mis' Eunice's tombstunn all catawampus, too! Don't dey know de whi' folks ain't gwine put up wid no sech triflin' ways as dat? I's gwine cl'ar up dis buryin'-gronn' ter-morrer, ef it am Thanksgiving', dat's all dar is to it. Dis lettin' things go ter pieces dis way! But Lord a massy! I's a ol' fool, lack dey say, en lackin' fur reasonmint. I keep on furgittin' I been gone thirty year en more. Ain't clapped eyes on dese here graves, sah, in more'n thirty year. Seen lack 'twuz yister-day I monnded up ol' marster's grave, en tol' Marse George good-by. Thirty year. I s'pee' all my people in dar."

He nodded toward the white tombs, and turned to look for the white plantation-house. Not a board, not a shingle of it left. Only the remnant of the chimneys, heaps of weather-eaten brick, trailed over with ivy and running weeds told where the house had stood.

The old negro's face was a study. For the first time the full significance of the changes of thirty years appealed to him. But even the old bricks seemed good; friendly, indeed, after his forty years' wanderings in the wilderness of poverty and strangers.

"Hit's a place ter die in, anyhow," he mused. "Hit's home, en everybody ought ter git home ter die at las'. En ef hit's only bricks en de bar earth, hit's better'n dat nadder, 'cause hit's respect'ful. Lemme see, now, whar wuz de nigger quarters? En ef dey ain't no house huecom I see smoke?"

In the fast-gathering twilight a long row of ruin, just visible under the ragged cedars, caught his eye and riveted his attention. Empty—nothing but 'old logs, rotted and ruined.

It was growing too dark to travel safely, and he was tired. How tired of his long tramp! Moreover, it was cloudy.

"Look lack it might snow pretty soon," he told himself, as he looked around at the lonely desolation.

Suddenly further down the old walk that had once been an avenue of cedars that led to the slaves' quarters he saw a light leap up against a shutterless window. It was the window of another cabin, but somewhat larger and in better preservation than the rest.

"De overseer's house!" exclaimed the old negro, with a chuckle. "Well, I ain't feared o' him no mo', suttin'y. I might fin' some my folks dar."

He stumbled around to the kitchen door, and knocked softly, almost reverently. There was a movement within, and a woman's voice called, softly:

"Eunice! Come open the door—my hands are in the tray."

A moment more and the kitchen door swung back; a girl with light hair and a sweet, gentle face stood before it. Behind her the dark, eager face of a boy of some fifteen years was turned toward the visitor. A woman, not old, but with white hairs that lay in beautiful waves upon temples delicate and refined, looked up from the tray of bread she was mixing at a table near by.

The place was poor and humble, but neat as hands could make it. From the living-room beyond the kitchen there was a gleam of red where the firelight fell upon a worn carpet. There were curtains before the windows—the plainest of muslin. A table, a few chairs, a bed and a work-stand, these were the furnishings. The woman had been weeping, for her eyes were red and swollen. The old negro took off his hat; his bundle lay on the door-step.

"Mistiss," said he, "I see yo' fiah froo de winder, en I 'lowed mebbly you'd let a ol' nigger whar's tired en col' come in de kitchen en warm hiss'f."

"Yes," she replied, in a voice that adversity had not robbed of its sweetness, "you may get warm; it's all I have to offer, but you are welcome to that."

"Thankee, numm," the wanderer replied, as he entered. "Thankee kindly, numm."

The eager old eyes went roaming about the room as he warmed himself at the kitchen fire. Finally he said:

"Mistiss, is you kin to folks what use ter lib here in de big house?"

"Yes," she replied. "My father's house stood there among the cedars. He was a rich cotton-planter and I was his daughter; but—nobody would believe it to see me now."

"Eh, eh! Yes, dey would! Yes, dey would, honey! Don't b'lieve dat. You's got yo' pappy's eyes, en you got Mis' Eunice's own voice, dat you is. 'Sides all dat, mistiss, dar's dat in quality folks dat no poverty en no po'ness en no time en seufflin' ain't gwine ter kill. I knows it. I's quality myse'f."

The woman looked up from the meal-batter she was mixing; there was a startled look in her eyes. The children stood in the doorway listening.

"Did you—did you—know—my—father?" gasped the mother.

"Did I?" He rose—a tall, erect figure, almost stately despite the rags that clung to it. "Did I know Marse George? I toted him in dese arms de day he was bawnd. I trotted him on dese knees when he wuzn't big ez de boy in de door dar. Look at dls coat, lady; look at it! Rags, you'll say. But hit's clof; hit's broadclof made in Nashvul. Marse George wuz married in dls coat, en so wuz I. He gib it ter me. 'Ca'se,' he sez, 'Unc' Joe, we's in de same boat, en we's got ter w'ar de same coat.' Yessum, I s'pee' I knowed 'em all fo' I wandered off after freedom come along. Dar wuz ol' marster, yo' gran'pa, en dar wuz Mis' Eunice, yo' gran'ma. I wuked fur dey-all thirty year en more. I waited on him after tronble come, en wheu he died I wuz de one dat laid hie in his grave. Den I moundd up his grave when dey put Mis' Eunice long side o' him, en den I wint. Oh, Lord; oh, Lord! I couldn't sca'cely lib fur de tronble dat come den." His voice broke, and the tears that had been held bravely in check burst forth and rolled down his cheeks.

The lady came forward, something between smiles and tears in her face.

"Why, who are you?" she asked. "What is your name?"

"Joe Ha'son by rights, aldo, I wuz 'Unc' Joe' ter der little chillen, Paul an' Elsie, dat wuz Marse George's chillen. Paul he died, but de little gal—she had ha'r lack de gol' o' de sunshine, en eyes lack de stars, en her voice hit wuz lack de guggle o' de ribber in de low ground. She allers lack Unc' Joe, en—"

"Oh, hush! hush!" the lady cried, and dropping into a chair covered her face with her apron and burst into tears. "I am that little golden-haired Elsie. Sorrow has silvered my hair and broken my heart. Look at me! Look at this cabin! It was a better home when it sheltered my father's servants, Wealth gone, and friends with it. First an invalid husband, then a widow. The few acres that are left gone to ruin for the lack of a hand to till them. The house burned over our heads by accident, so that we were glad to creep into the old overseer's cabin, I and my children, for this is another Paul, my boy, and this another Eunice, named for the grand-mother you helped to bury."

The old man stood looking down upon her grief. He had thought his own sorrows great, but they were forgotten in hers.

"Dar, now," said he, "don't you be discouraged. Unc' Joe gwine fix things up fur you. 'Pears lack I jes' got home in the nick o' time. I's a good carpenter, en toler'bul handy ef I is ol'. Dar's plenty cedar in de glades. I remembers it all same as yistiddy. 'Pears lack we sorter needs one 'nother, mistiss. Look lack de good Lord done sont me here. Marse George's chil' ain't gwine want fur a free hand while ol' Joe's 'bove de ground, dat's certain. I gwine begin ter-morrer ef you got a hole you can stow me 'way in."

"There's Mammy Lon's ol' cabin, Unc' Joe," she replied. "It has a good fireplace, and we've got plenty of wood. You are to stay as long as you like, but I do not expect you to work. You are too old for that."

"Mistiss, put on yo' bread en git de little chillen dey supper. I gwine look at Lou's house, en git a blaze in hit. Den mebbly you gimme a quilt. After supper I got somefin' ter tell you."

The snow came in an hour—the good Thanksgiving snow. The fire roared up the chimney of Mammy Lon's deserted cabin, which the new tenant had made clean and cheerful. Wood was heaped in a corner. The mistress appeared with an armful of bedding.

"Uncle Joe, go to the door and tell Paul to show you the bedstead that I pointed out to him, and to help you bring it here. Then you must bring the mattress and the old rug that I laid out for you. We must fix you up a place to live while you're here."

The old man turned to her a face upon which the light seemed to fairly dance.

"Mistiss," said he, "Mis' Elsie, I ain't never gwine 'way from here no mo'. Ol' or not ol', dis here's my home, en de Lord

he'pin' me, here I's gwine ter die. Fur why? One thing, you needs me; nex' thing, I needs you. Yo' fences am all down, en, Mis' Elsie, so am ol' Joe's." And then old Joe did break down and sob like a child.

"There, there, then," said the mistress, "you shall do as you please. Go or stay—only don't cry; it hurts me to see it."

"Mis' Elsie"—the old gray head seemed to touch the ceiling, so proudly was it lifted—"I runned away whar I wuz stayin', ober yonder in Alabama. I didn't hab no home en folks, en de emmittee o' some kind, dey wuz tryin' ter fetch me ter de po'house. Me! A Ha'son! Me! I tol' 'em ol' marster raised me up ter be a gin'leman. I allers libed a gin'leman, en God he'pin' of me I'd die a gin'leman. I could starve, ef I had it ter do, but I helt my head too high fur dat. So I say ter myse'f, I's gwine light out dis night fur Tennessee, en look up my folks, en ax 'em fur a hole ter die in. En I done it; en here I is—en here I stays. Mistiss, I been two days en nights on de road, wid two biscuits en a half a hoe-eake fur my victuals. I erope froo corn-fields en cotton-patches en woods lots a-hidin', 'cause dey say I ain't right in my mind, not want'n ter go ter de po'house, en I's feared dey fetch me back. I slep' on de ground in de woods, ef I slep' at all. I'd 'a' died on de road ef I hadn't want ter git here so bad. En I say ter myse'f, dar ain't none o' my ol' marster's folks gwine drible me off; not at Thanksgiving-time, nohow. Ef dey got a tuckey, ol' Joe'll sholy hab a bone; ef dey ain't, I can be hungry long o' de chillen what I he'ped ter raise. Mistiss, I's here. Ter-morrer hit's Thanksgiving'. Look at my ol' shoes; de sole's gone, wid de long tramp ter git here. Look at my ol' coat; hit wuz onct a weddin'-garment. Ef you sen' me off—"

She stepped over to his side and laid her hand upon the tattered old sleeve where her mother's own hand had rested upon her bridal-night. Her eyes were dim with tears.

"Uncle Joe," she said, "this is your home. Your wanderings are over. We'll all struggle on together, and, please God, you shall die a gentleman and be buried as one for the effort you have made to live as one. Go now and bring your furniture. Paul knows it all. And tell Eunice to come and help us. Let your old heart be at rest now; you are at home."

Home! How snug and warm they made it! They heard him singing in the night; his voice rang out across the snow, so full of cheer and hope and happiness that their own hearts revived, too.

"Perhaps thlugs will brighten," the mother said to her oldest, as they sat late over the fire plecting a suit for Uncle Joe out of their father's old clothes. "Perhaps we will do better than we think. I feel more hopeful, somehow."

"If we had the rails to fence in the fields I could plow and sow them in the spring," said Paul, "and get a start. But we can do nothing without rails."

"I'll drop corn," said Eunice; "anything to help. And I'll pick cotton in the fall. If I knew how I would make the rails."

"Well, we will hope and pray," said the mother.

"And give thanks," laughed Eunice. "Tomorrow is Thanksgiving, anyhow."

"We've nothing to return thanks for unless it is Uncle Joe," said Paul. "And we haven't so much as a pullet to celebrate him with. Mother, how do people get a start who have only a heap of empty acres without a mule or a horse or a rail or a bag of seed in the world? I confess it looks dark to me."

"Let's drop it for a day," cried Eunice. "Let's quit grumbling, quit asking, quit regretting for one whole day, and just be thankful for—for—"

"What?" said Paul, dryly.

"Why, for Uncle Joe, to be snre," laughed Eunice. "Shall we, mother?"

"Yes," she replied. "I'm willing. And we'll have a potato-pie and some beaten biscuits. But, as Paul says, the meat is missing. We've only one shoulder, and that is fat, too fat to broil or fry. It will be a sorry feast."

"Then it must be a 'flow of soul,'" said Eunice, "because we are going to forget our sorrows and worries and be thankful for one blessed day more before we die."

"Thankful for nothing!" sneered Paul. "I call it a hnnbng!"

"You'll think differently when it's fairly on," said Eunice. "Besides, you forget Uncle Joe. If we've nothing to rejoice for we have the pleasure of knowing we gave him something, and I am thankful for that. To bed now, and not a thought of tronble for thirty-six hours. Hurrah! I feel like—a queen."

"And I like a bloated bond-holder," laughed Paul, who began at last to catch the feeling of hope that had taken hold upon his mother and sister. "Good-night. I want to be permitted to present the clothes in the morning, as you and mother had the pleasure of providing them."

The morning dawned like a bride arrayed for her bridal. Every blade of grass sparkled and shone; the old cedars drooped heavily under their burden of snow.

Before the door of Mammy Lon's cabin the snow was unbroken. Uncle Joe had not stirred—his long tramp and the sudden relaxation from uneasiness had left him exhausted in mind and body.

Paul opened the door and went in. The old man was lying upon the bed. His face, turned to the light, wore a peaceful,

quiet look that was good to see. Paul touched him lightly. "Uncle Joe!" He opened his eyes, sat up and stared. "Uncle Joe, here's some clothes mother sent you, and some shoes that father left. Get into them and come to the house and get some breakfast. There's hot coffee—and not much of anything else, I'm afraid."

The old negro lifted up his hand and laid it upon the boy's head with sudden, solemn meaning.

"Good Lord," said he, "bless dis boy; bless dis little chil' what's brought comfort ter a lone ol' man—a wanderer come of a wanderin' race! Bless him, en bless his house! Hol' up his hands, Lord, en strencken his heart fur de battle befo' him! Amen!"

The trembling old hand slipped from the boy's head and clasped its mate in jubilant rejoicing. "Little marster," cried its owner, "how good is de Lord! How good ter his onworthy ehilun. I'm thankful dis day ter git home; en I'm thankful fur de clothes en fur de coffee. En I'm thankful ter be spared ter lay my hand on de haid o' a he'pful chil' dis day."

Somehow Uncle Joe's thanksgiving was contagious. All morning Eunice was singing, Paul whistling, and even the sad-voiced mother called cheerily to Uncle Joe "not to kill himself bringing in wood."

"If we only had a turkey or some birds of some kind it would be a genuine Thanksgiving," said Eunice, when Uncle Joe was kneeling upon the hearth blowing a network of splinters to a blaze.

"Birds?" said he. "Ef dat's all, I'll git de birds. You make de biscuits en de tater-pie, Mis' Elsie, en I'll 'tend ter de barbecue."

He chuckled in a knowing, happy way, and asked for a bit of fat bacon and a ball of cord. After awhile from the kitchen window they saw him sitting in the cabin door holding the end of a string, the other end of which was attached to a broad, heavy board or blind, about which crumbs of bread had been plentifully sprinkled. Snowbirds in squads of a dozen, fifteen and twenty were picking greedily at the crumbs when Uncle Joe gave the string a sudden jerk and the board fell without warning. Again and again the snare was set and the snowbirds taken prisoner. When the potato-pie was browning and the heseints ready for the pan Eunice was sent to investigate as to the outlook for game for dinner. She gave a little scream when on opening the cabin door the odor of the birds came up to meet her.

"Uncle Joe! Uncle Joe! What in the wide world is it, and for mercy's sake how many have you got, and how are you cooking them?" she cried.

"Come in, come in, missy, and see de Thanksgiving turkey," laughed Uncle Joe, mopping the perspiration from his shiny old face. "Come in en tell me ef dey's 'nuff. It took a passel of 'em fur dis plantation forty year ago."

"Well, it doesn't take near so many now," laughed Eunice, "so do stop. But cook one more, so I may see how to do it."

"Dar's jest one mo' left," said Uncle Joe. "En ef dis ain't de best Thanksgiving turkey yon eber set yo' teef in den I's done los' my indiscrimination. Fus' thing, missy, I opens de bird in de back—not in de breas'—en den I slip in dis here strip o' thin bac'n, 'ca'se de bird got ter be dressed up jus' fo' you put de bac'n in. Den I ties a string round it, leahin' one end o' de string ter hang it up by, in front o' de fire, fun de nail I done druv in here twixt de bricks. Den it begin ter swing see-saw, dat's it. Now hit'll swing en turn en bake while I'm fixin' ob de next one. Or it would ef dat wuzn't de las' one. Lemme see, now, dat makes twenty-nine. I reckon dat'll sort o' do."

"Do! Why, it will 'do' for a week! Oh, what a delightful old conjurer you are, Uncle Joe! I expect you'll be conjuring a fence around this farm by and by, and a lot of seed-corn and a mule and some cotton-seed; and then you will truly have conjured hope back to our hearts again. Come on now; let's go to mother. You'll have to carry 'the turkey'; it is quite too much for me. Dear! dear! it is Thanksgiving, after all."

"It sholy am, missy," said Uncle Joe. "Hit opened up in my cabin dis mawuin' wid a suit o' clothes en a pa'r o' shoes. But it begun in my ol' heart las' night when de blaze fus' broke out on Mammy Lon's ol' h'arth."

"Mercy!" cried Paul, meeting the dish of birds in the kitchen doorway, "wbat a feast! Mother, do come and see what Uncle Joe has brought for a centerpiece for our Thanksgiving table! Truly it is Thanksgiving, mother."

"But he says it began in his cabin," said Eunice. "And I think myself that it did."

"But it didn't end there, Uncle Joe," said Paul, "for I've got it here in my heart all right and as big as the house. If only tomorrow—"

"It isn't here yet," said the mother. "No worry to-day—that was our understanding. Come, now, the biscuits are brown, the birds are a temptation, the coffee is pure gold, and the pie is a jewel. Uncle Joe found some guinea-eggs in the old gin-house; he has been prowling and making discoveries all day. Somehow—Where is he? Look! half way to the barn. I was going to say he is somehow like a blessing sent us; and I feel thankful for his coming."

They were destined to feel more grateful still. For at night, when the lamps were lighted, and the mistress was seated with the

children before the fire, Uncle Joe's old gray head was thrust into the doorway.

"Mis' Elsie?" said he.

"Yes; come in, Uncle Joe; there's a corner for you whenever you care to come in."

"Yessum; thankee, mum. Yo' gran'ma al-lers kep' a place fer de ol' folks, ter. I come in here ter tell you dey's a passel o' cotton-seed up at de ol' gin-house. Plenty fur hofe de fields. En I can cut wood 'nuff ter buy all de corn you want, en more. Ef you'll make de trade wid some o' de town folks fur a team I cau make de fus' payment wid de wood. Den dey got ter wait fur de nex' un till de erap's made, 'ca'se I'm bleegeed ter split de rails fur de fences. De cedar's jes' etchin' ter git itsef made inter dem rails en git itsef wropped around dis here plantation. But we got ter he hustlin', I tell you."

The three of them looked up, to wonder, to smile and to rejoice. The riddle was solved in a moment. Paul got up and went over to the old man's side.

"Uncle Joe," said he, "I am only a hoy—a book-worm rather than a farmer—but I am ready to help. I'll do all the hauling, and you must teach me how to plow and to make rails and to do my part, for I earnestly mean to try."

"G'long back ter yo' books," snapped Uncle Joe. Already he was feeling his old-time authority. "Reckin I got sense 'nuff ter kerry on dis plantation. I plowed here fo' yon wuz bawn. I reckon I can do it now."

"But he must help, Uncle Joe," said the mother. "He can study at night, but he must do his part. It will help to make a man of him to try to fill his father's place."

It was Eunice, however, who brought the tears to the old man's eyes. She looked up from the shirt on which she had been putting the buttons.

"Uncle Joe," she said, "you are our Thanksgiving inspiration. You came home to die, and instead of death you have brought life to the old plantation. And here is a good, warm woolen shirt that will help yon not to carry out your intentions this winter, at all events. I made it for you with my own hands. And if the old place thrives I shall make yon another next Thanksgiving, with a beautiful white linen one to wear over it Sundays; see if I don't."

The next Thanksgiving Uncle Joe claimed his shirts.

GERMAN CANARIES

In powers of song no canaries can match those of the Harz mountains. German canaries can be divided into two kinds—the common country-bred and the Harz canary, or songster. The home of these birds, the Harz, an entirely isolated chain of mountains rising out of the plain between the rivers Lelne and Saale, is the most northern elevation of importance in Germany, and lies partly in Prussia, partly in Anhalt and Brunswick. The best song-canaries are reared here at the present time chiefly in Andreasberg, a town also celebrated for its silver-mines. In every house and cottage of the place you see canaries, and on a fine summer's day, when walking by, their song greets you from every open door and window. Whereas with other races of canaries color, markings, shape and size are important points, with this breed there is but one—their song. The birds are usually of middle size and strongly built; the head is larger, the legs shorter and the neck not so long as in the common canary; the legs slant backward a little, and the bird does not stand as upright as the others. The breast ought to be broad and strong, the eyes large and lively; the feathers must lie smoothly, and the bird ought to execute all its movements with a sort of coquetry. The colors vary from straw to golden yellow, some with green markings; but deeper shades of yellow are not to be found among them. If we say that these birds have to take the second place in outward beauty of form and color we certainly must give them the first of all in point of song. Their entire value lies in this. With the utmost care and science their voice has been cultivated for years, and splendid results have been obtained. The song of a really first-class Harz bird is a marvel of beauty for those who understand it, but it needs much practice and a musical ear to note slight differences and faults and to be able to choose the really best songster.

The number of people who keep canaries in Germany is very great; they are to be found in the houses of the rich as in the cottages of the poor, and everywhere the little yellow songster is valued and cherished. Workmen often save their money to buy and keep a canary, and the breeding is sometimes an important item in the income of poorer families. In the Harz districts the trade in canaries is the source of the principal income to the inhabitants, many thousand birds being exported every year, the prices varying for cocks from ten shillings a head wholesale to thirty shillings, or £3 for the best single birds. This may seem a great deal, but some first-class singers have been known to fetch even more. The canary's song is seldom heard in perfection, and the few birds who reach the highest standard of melody are not often for sale, breeders preferring to keep them for their own use as masters. Only those who have had the opportunity of hearing one of these rare birds can form an idea of what a beautiful thing the song of a canary can be.—Chambers' Journal.



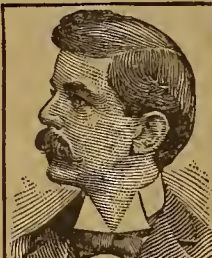
"Well, I say that the very best of men don't know the difference between their souls and their stomachs, and they fancy that they are a-wrestling with their doubts when really it is their dinners they're a-wrestling with."

"Take my old man. A kinder husband never drew breath; yet so sure as he touches a bit of pork he begins to worry hisself about the doctrine of Election, till I say, 'I'd be ashamed to go troubling the minister with my doubts when an Ayer's Pill would set things straight again.'"

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For sowing and reaping, for cold and for heat,
For sweets of the flowers, and gold of the wheat,
For ships in the harbors, for sails on the sea,
O Father in heaven, our songs rise to thee.

For parents who care for us day by day,
For sisters and brothers, for work and for play,
For dear little babies, so helpless and fair,
O Father, we send thee our praise and our prayer.

For teachers who guide us so patiently on,
For frolics with mates when our lessons are done,
For shelter and clothing, for every day's food,
We bless thee, our Father, the giver of good.

For peace and for plenty, for freedom, for rest,
For joy in the land from east to the west,
For the dear starry flag, with its red, white and blue,
We thank thee from hearts that are honest and true.

For waking and sleeping, for blessings to be,
We children would offer our praises to thee;
For God is our Father, and bends from above,
To keep the round world in the smile of his love.

—Margaret E. Sangster.

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A legend relates that a young man who had sinned deeply became a monk and resolved to do penance for his misdeeds. He determined to copy the Bible, that he might learn every letter of the divine commands which he had violated. Every day for many years he patiently pursued his task.

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CARRYING BURDENS GRACEFULLY

"Now watch her," said a tourist friend, pointing to a peasant woman who had lifted a heavy basket up to her head and was walking off with a free, sure step. "See how steadily she carries it and how well her head is poised. If that were one of our countrywomen she would try to carry that basket on her arm, where it would be in her own way and in that of every one who passed. She would shift it from side to side, bending awkwardly under its weight, and reach her destination tired out. But that woman has learned how to carry a load—and what a fine, erect carriage she has! It's a pity our girls cannot have a little training along that line!"

While our enthusiast talked we thought of another kind of burden and of how much it means to "learn how to carry a load." Bear them we must, of one sort or another—the burdens of grief, care and disappointment that belong to our human lot—but we all know how differently. Some bend under them and stagger on complainingly, obtruding them upon every one who comes near. Some lift them quietly out of others' way, and since they must needs be borne, learn to bear them steadily and serenely. There is a gracious poise and beauty of spirit that can be acquired only by the proper bearing of burdens.—The Young Woman.

LEAVE THE SHADOWS BEHIND

If you would increase your happiness and prolong your life forget your neighbor's faults. Forget all the slander you have ever heard. Forget the temptations. Forget the fault-finding, and give little thought to the cause which provoked it. Forget the peculiarities of your friends, and only remember the good points which make you fond of them. Forget all personal quarrels or histories you may have heard by accident, and which, if repeated, would seem a thousand times worse than they are. Obliterate everything disagreeable from yesterday; start out with a clean sheet to-day, and write upon it, for sweet memory's sake, only those things which are lovely and lovable. Thus you will make life better worth living.—Household.

SOME GOLDEN THOUGHTS FROM GREAT THINKERS

The happiest heart that ever beat
Was in some quiet breast
That found the common daylight sweet,
And left to heaven the rest.

—J. V. Cheney.

If at the last judgment God should accuse me of being too stern and pitiless, I should have nothing to answer him; but if he should charge me with too great leniency and pity, I can always say, "I have learnt mercy of him whose mercies are infinite."—Bernard of Asti.

Life may be hallowed by no thought more powerfully than by this, that it is watched, nor peace secured by any stronger trust than that the Almighty assumes responsibility for it; nor has work ever been inspired by keener sense of honor than when we feel that God gives us freedom and safety for it. These are the fundamental pieties of the soul, and no elaborateness of doctrine can compensate for the loss of fresh convictions of their truth.—George Adam Smith.

Consecration is not the act of our feelings, but of our will. Do not try to feel anything. Do not try to make yourself fit or good or earnest enough for Christ. God is working in you to will, whether you feel it or not. He is giving you power at this moment to will and to do his good pleasure. Believe this, and act upon it at once, and say, "Lord Jesus, I am willing to be thine;" or if you cannot say so much as that, say, "Lord Jesus, I am willing to be made willing to be thine forevermore."—Meyer.

When God speaks he likes no other voice to break the stillness but his own. And hence the place that has always been given to solitude in all true religious life. It can be overdone, but it can be grossly underdone. And there is no lesson more worth insisting on in days like ours than this—that when God wants to speak with a man he wants to be alone. . . . Than the worshipers who do all their religion in public there are none more profoundly to be pitied, and he who knows not what it is to go out from the crowd sometimes and be alone with God is a stranger to the most divine experience that comes to sanctify a Christian's heart.—Drummond, in the "Ideal Life."

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That's flyin' half as high as we
An' slingin' airs at every turn.
With money in the house to burn.
We're livin' now in scrumptious style,
An' ma says of'n, with a smile,
They ain't none of us got no kicks
Since pa got into politics.

When he was poor an' had to work,
To make his livin', like a Turk,
He used to say this ole world were
A vain delusion an' a snare!
It tuk all he could scrape an' get
To feed an' dress us, but you bet
He ain't in that orful fix
Since he got into politics.

He says the man that labors is
A chump that isn't onto his biz,
An' hasn't sense 'nuff in his brains
To chase him indoors when it rains.
He used to be that way, but tuk
A tumble, an' the best of luck
Falls his way like a thousand bricks
Since he went into politics.

He's wearin' clothes that's mighty ripe,
An' smokes segars 'stead of his pipe,
An' gits shaved at the barber's where
They squirt rumsquintum on his hair.
He talks about combines an' rings
An' fusion an' some other things,
An' says he's outo all their tricks
Sluce he got into politics.

Pa used to be a Christian, an'
Could sing an' pray to heat the han',
An' jest to guide our footsteps right
Had family prayers every night;
But now we're all in bed when he
Comes home at night, an' ma says she
Imagines pious things won't mix
In corjial way with politics.

Ma asked him once if it was right
To help the corporations fight
The bones' people, an' he clinked
Some dollars in his hand, an' winked,
An' said she mustn't chaw the rag
'Long as she stands an' holds the bag
Whilst he climbs up the tree an' picks
The golden plums of politics.

—Denver Post.

GOOD STORIES OF A BISHOP

MANY anecdotes were told of Bishop Williams, of Connecticut, after his death, for the good bishop was as well known for his love of fun as for his earnest piety.

At a meeting of the bishops a measure was proposed and explained by its originator, but with such incoherence that nobody understood it. A second speaker essayed to make the matter clear, but only darkened it. When he had finished, Bishop Benjamin Smith, of Kentucky, tried to explain the question and also the explanations. Feeling that he had failed, he said:

"Bishop Williams smiles. What has he to say about it?"

"Only this," said the old bishop, "that 'the mess of Benjamin was found to be greater than the mess of any of his brethren.'"

"The humor of Dr. Williams," says a friend, "was always present and ready like the flash of sunlight. It had one peculiarity—it never scorched nor left a scar behind."

At an assemblage of noted men a lawyer who conducts the legal business of a great railway system tried to "guy the parson" by malicious quizzing. At last he said:

"Why don't you get these railway managers to give you a pass over their roads, bishop? You can pay for it by giving them entrance-tickets into heaven."

"Oh, no!" gently replied the bishop. "I would not part them so far from their consil in the other world."

The laugh was general, and the lawyer concluded to "let the parson alone."—Youth's Companion.

TOO HEALTHY

Asket—"Back home again, eh? What was the matter—too healthy for you out there?"

Doctor—"Exactly. There was only one case of sickness in the town the whole time I was there."

Asket—"And I suppose some other doctor had that?"

Doctor—"No, I had it. It was homesickness."—Philadelphia Press.

DISCUSSING LITERATURE

"Who is your favorite author?" asked the duffy summer girl.

"Confucius," answered the distinguished Chinaman. "All our people read him."

"Confucius?" she repeated. "Why—er—what magazine does he write for?"—Washington Star.

BRET HARTE AND THE WAITRESS

Bret Harte has been so long a resident of Great Britain that the days of his early fame, when he was a new writer and when from time to time he appeared on American lecture-platforms, seem very far away.

He still loves to tell anecdotes of those early days, and among his stories is one of the time that he lectured at the famous New England town of Concord, Mass.

On the morning following his lecture he went down into the dining-room of the inn with his mind filled with thoughts of the men who had made the name of Concord so widely famous.

He looked dreamily from the window, fancying Hawthorne and Emerson and Thoreau and Alcott as they once paced along that village street. He was so wrapped up in thoughts of the past that he forgot the present, and did not notice that a prim young woman waiter was standing patiently beside him.

When she saw that at length she was observed she rattled out swiftly and without a break between any of the words:

"Mush, coffee, tea, ham, eggs and bacon. I enjoyed your lecture last night very much, Mr. Harte; there was a very select audience."—Saturday Evening Post.

A GOOD STORY

John Drew gives the following as "one of the best stories I ever heard:"

"He had lost his life in the great Johnstown flood. He was dead. But the appalling scenes and incidents of that terrible event were still the only things on which he could fix his thoughts. As he entered the pearly gates of the spirit world he was so full of his subject that he felt he must talk of it.

"He approached an aged man and told him the story of how he died, and gave him a vivid word-picture of the scenes of devastation in connection with the flood. It was a lurid tale, but to the Johnstown man's surprise his auditor showed little interest in it; in fact, he seemed rather bored. The flood victim told the next man he accosted of the old man's indifference to his story.

"That's not strange," said the second man. "Do you know who that was?"

"I do not," replied the Pennsylvanian. "I've only just arrived."

"Oh," said the other, "that accounts for it. You were talking to Noah."—Chicago Post.

TIMELY

Many who have enjoyed the interesting collection of Burbank's Indian portraits would have appreciated a little story about Barabchia, "The Belle of the Southern Utes," of whom two pictures were exhibited. A party of Eastern gentlemen, among whom was a photographer, traveling through a small Western town had the young squaw pointed out to them. Wishing to get a picture, they persuaded her to mount a bicycle, and the Indian beauty—blauket, heads and all—on a '98 model would have been a fine sight, but alas! she had never learned the fine art of riding. She "wobbled," and the man from New York sprang to steady the wheel, whereupon the girl, to get her balance, threw her arms about his neck and—the kodak snapped. The New-Yorker insisted upon buying the plate, but rumor has it that one little blue print was first struck off by a fun-loving friend and sent East to the wife, who will doubtless have a warm reception for her husband on his return.—Chicago Journal.

SHE KNEW THE SIGN

"Say, ma, the gentleman who is sitting opposite us danced with me several times. Do you think that would justify me in thinking that he may have serious intentions toward me?"

"No, my child! You see that he's carefully folding up his napkin—the monster is married!"—Fliegende Blaetter.

GROUNDS FOR DIVORCE

Judge—"What are your grounds for seeking a divorce?"

Plaintiff—"Well, my husband has developed a scheme for the regeneration of the race and for making life worth living, and he is practicing on me."

Judge—"Granted."

NOT IN HIS CASE

Mr. Addlepat—"Where ignorance is bliss, you know, 'tis folly to be wise."

Mrs. Wilkins—"Yes, I know. Still it may interest you to know that your hat is all jammed in at the top."

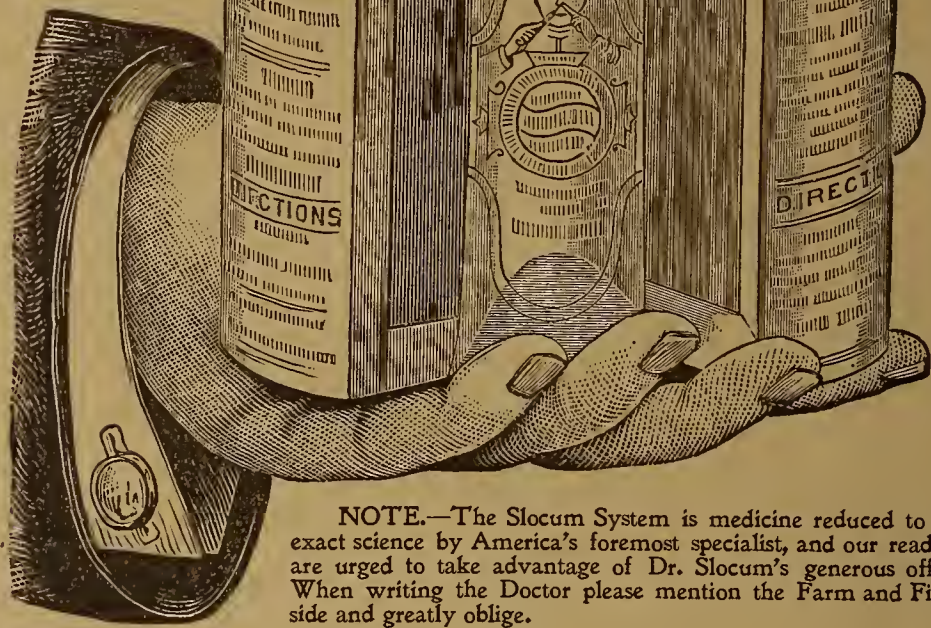
Then he felt mean for half an hour.—Truth.

HERE IS HEALTH

FREE

These Four New Preparations comprise a complete treatment for nearly all the ills of life.

The Food-emulsion is needed by some, the Tonic by others, the Expecto-
rant by others, the Jelly by others still, and all four, or any three, or two, or any one, may be used singly or in combination, according to the exigencies of the case. Full instructions with each set of four free remedies, represented in this illustration.



NOTE.—The Slocum System is medicine reduced to an exact science by America's foremost specialist, and our readers are urged to take advantage of Dr. Slocum's generous offer. When writing the Doctor please mention the Farm and Fireside and greatly oblige.

THESE FOUR REMEDIES

Represent a New system of medicinal treatment for the weak, and those suffering from wasting diseases, weak lungs, coughs, sore throat, catarrh, consumption and other pulmonary troubles, or inflammatory conditions of nose, throat and lungs.

The treatment is free. You have only to write to obtain it.

By the system devised by DR. T. A. SLOCUM, the great specialist in pulmonary and kindred diseases, the needs of the sick body are supplied by the FOUR distinct remedies constituting his Special Treatment known as the Slocum System.

Whatever your disease, one or more of these four remedies will be of benefit to you.

According to the needs of your case, fully explained in the treatise given free with the free remedies, you may take one, or any two, or three, or all four, in combination.

The ailments of women and delicate children are speedily relieved.

The four remedies form a panoply of strength against disease in whatever shape it may attack you.

THE FREE OFFER—WRITE

To obtain these four FREE preparations, illustrated above, write, mentioning the Farm and Fireside, in which you read this article, to

DR. T. A. SLOCUM, 98 Pine Street, New York,

giving name and full address. The four free remedies will then be sent you, in the hope that if they do you good you will recommend them to your friends.

A HEALTH RESORT

Excelsior Springs, Mo., on the Kansas City line of the Chicago, Milwaukee & St. Paul Railway has become one of the leading all-the-year-around health and pleasure resorts in the United States. The use of its waters has benefited a great many sufferers.

The Chicago, Milwaukee & St. Paul Railway has just issued a finely illustrated booklet, describing the resort and telling of its advantages, which will be sent free on application to Geo. H. Heafford, General Passenger Agent, Chicago, with two-cent stamp inclosed for postage.

FREE RUPTURE CURE!

If ruptured write to Dr. W. S. Rice, 7 Main Street, Adams, New York, and he will send free a trial of his wonderful method. Whether skeptical or not get this free method and try the remarkable invention that cures without pain, danger, operation or detention from work. Write to-day. Don't wait.

ECZEMA

Facial Eruptions, Tetter, Salt Rheum, Barber's Itch, Scald Head, Ring Worm, Itching Piles, Sore Eyelids, and all Skin diseases promptly cured by Spencer's Ointment. Sent to any address on receipt of 25c. A. O. PILSON, Pharmacist, 1827 W. Baltimore St., Baltimore, Md.



1427 Silk Fringe Cards, Love, Transparent, Escort & Acquaintance Cards, New Fusties, New Omeas, Premium Articles, &c. Finest Sample Book of Visiting & Hidden Name Cards, Direct Catalogue. Send 2c stamp for all. OHIO CARD CO., CLEVELAND, OHIO.

AGENTS you can make big money by taking orders for **Battles' Seeds** New plan. Quick sales. Splendid outfit. Write to-day. FRANK H. BATTLES, Seed Grower, ROCHESTER, N. Y.



MAGIC GOLDOMETER for hunting Minerals, Gold and Silver, also Rods and Needles. Circular 2 cents. B. G. STAUFFER, Dept. F. F., Harrisburg, Pa.

ONE YEAR FOR 10 CENTS

We send our large 16-page, 64-col. monthly paper devoted to Stories, Home Decorations, Fashions, Household, Orchard, Garden, Floriculture, Poultry, etc., one year for 10 cents, if you also send names and addresses of six lady friends. WOMAN'S FARM JOURNAL, 4312 Easton Ave., Saint Louis, Mo.

BED-WETTING CURED. Sample FREE. Dr. F. E. May, Bloomington, Ill.

FAT
How to reduce it
Mr. Hugo Horn, 344 E. 65th St., New York City, writes:
'It reduced my weight 40 lbs. three years ago, and I have not gained an ounce since.' Purely vegetable, and harmless as water. Any one can make it at home at little expense. No starving. No sickness. We will mail a box of it and full particulars in a plain sealed package for 4 cents for postage, etc.
Hall Chemical Co.,
Dept. B, ST. LOUIS, MO.

KIDNEY AND BLADDER CURE FREE.
Any sufferer from diseases, Bright's troubles, and any kidney and bladder disease, urethral disease of the urinary address to Dr. D. A. Williams, East Hampton, Conn., will receive by mail, absolutely free, Trial Treatment of the one medicine that will permanently cure after everything else has failed.

\$3 a Day Sure
Send us your address and we will show you how to make \$3 a day absolutely sure; we furnish the work and teach you free, you work in the locality where you live. Send us your address and we will explain the business fully, remember we guarantee a clear profit of \$3 for every day's work, absolutely sure. Write at once. ROYAL MANUFACTURING CO., Box 206, Detroit, Mich.

CANCER CURED
NO CAUSTIC NO KNIFE NO PAIN NO TORTURE
CURE IN FROM 5 TO 20 DAYS. Written guarantee, NO CURE, NO PAY. Free treatise. DR. GRAY CANCER CO., 215 South Illinois St., Indianapolis, Ind.

PAYS to write for our 260-page free book. Tells how men with small capital can make money with a Magic Lantern or Stereopticon. McALLISTER, Mfg. Optician, 49 Nassau St., N. Y.

We Pay \$18 a week and expenses to men with rigs to introduce our Poultry Compound. JAVELLE MFG. CO., Dept. 58, Parsons, Kansas.

RUPTURE CURED while you work. You pay \$4 when cured. No cure, no pay. ALEX. SPEIRS, Box 53, Westbrook, Maine.

DEAFNESS CURED OR NO PAY. C. H. ROWAN, MILWAUKEE, WIS.

HOUSEHOLD

[CONTINUED FROM PAGE 13]

PREPARING FOR WINTER

THE long, hot summer was followed by the season of crisp, cool mornings, golden, sunny days, the breath of whose air flushed the cheek like wine, and chilly evenings, when an open wood-fire is a very cheerful companion. But we know the cold and storms of winter are not far away, so while we enjoy all this loveliness we must not delay too long the cold-weather preparations. As in the summer arrangement of the house the main idea is to make it look as cool as possible, so in winter we not only try to make the rooms warm, but also to have them look so.

The ideal way to heat a house, it seems to me, is with a furnace, the supply of air for which is brought directly from out of doors; but the eye craves something more, and happy are they who have every room and passageway warmed to an even temperature, and then in whose living-room, at least, where the family congregates in the evening, an open fire is kept burning. It not only pleases the eye and adds to the cozy and comfortable appearance of the room, but there is no better means of ventilation. Now is the time when the heating apparatus, whatever it is, should be overhauled and put in order, pipes and chimneys cleaned of soot, and the winter's supply of fuel laid in. If the house is exposed to winds, double windows and storm-doors add much to the warmth. If doors or windows have become loose-fitting, weather-strips are easily applied and keep out cold drafts. Heavy curtains at the windows will add to the air of warmth and comfort of the room, but they should be so hung as to be pushed entirely to the sides, to let in the sunshine during the day, and drawn over the windows closely at night. In my house are two doors opening on porches which are not used in the winter. I have found that heavy curtains hung over these doors keep out cold drafts and make the rooms look warmer.

Next to the warmth and warm-looking furnishings of a house light adds to the good cheer of winter evenings. For safety and convenience a bracket-lamp with a reflector is best for the kitchen; in the hall a subdued light which shines through a red shade intensifies the warmth and comfort which greet one coming in from the wintry cold. The general living-room, where the family gathers to spend the winter evenings, should be the best-lighted room in the house, so that each person may have just the light that suits them best for writing, sewing or reading. Really handsome lamps are not expensive now, and there is no reason for one to stint their family in this respect. See to it that the children have a good light if they are reading or studying, and that it is so arranged as to come from above and over the left shoulder. Hanging-lamps are not used so much as formerly, and when they are used need to be supplemented by others to give the light just where it is needed.

Now that the house is all in order for winter it is time to arrange for a good supply of reading matter. We have found a magazine club very satisfactory, as by it we have the reading of eight magazines for the cost of two. Four families combine, and each family subscribes for two magazines; then the first of each month number one sends their magazines to number two, number two sends theirs to number three, and number three sends to number four, and number four sends to number one. Each family keeps the two magazines a week and then sends them to the next in order. At the end of the month your own magazines come back to you and you are ready to start the new ones on their round.

* MAIDA McL.

THE WEIGHT OF OBLIGATION

It has been said that at the roll-call of the virtues gratitude is either the last to appear or is altogether absent.

Whether this is true or not, it must be conceded that gratitude does not invariably accompany her sister virtues, nor can her presence always be readily discerned when occasion calls for it.

Yet if the truth were known we might find that obligation bears down upon every one, excepting, perhaps, the professional tramp and beggar, who, after all, by a paradox, earn their living professionally, and are beholden to none.

A dear old lady—the well-beloved of a large circle of wealthy nephews and nieces—came home one day from the city where she had been visiting them, her arms laden with packages, which she tossed separately and with some force upon the kitchen table. "Here's a black silk dress for me," she said. "Here's another for Nettie, and one for Julia. Here's a box of gloves and one of handkerchiefs. Here are three lovely hats, one apiece"—as the hat-box with greater care was deposited with the rest—"and what's better than all, girls, the thanking's done."

Yes, the "thanking" was done, and to the independent, sensitive yet grateful spirit that meant relief unspeakable. One would naturally think it ought never to be a burden to express gratitude for kindness shown, for gifts tendered, yet if the kindness is constantly renewed, and if circumstances render it impossible to make clear by grateful service one's appreciation of the gifts, the cumulative effect is often a weight of obligation oppressive to the spirit and paralyzing to the tongue.

It is, in truth, more blessed to give than to receive; it is certainly far more pleasant, and the luxury of large giving is one which all may well covet if only for the mere pleasure of it. But it is for him whom Fate has made the recipient—not the giver—to study the art of expressing happily the gratitude that he feels. It is not always best expressed by formal thanks; there is a fine grace of acceptance that even without words cannot fail to be understood, and that in some circumstances is in itself the highest type of generosity. And for him whom Fate has blessed—the happy one, because the giver—it is also well for him to study tact and tenderness in his bestowing. To aid another in helping himself, when that is possible, is the truer kindness, the better gift, lest otherwise the weight of obligation press down too heavily upon some independent, courageous and yet helpless soul. LILLA A. WHITNEY.

A NEW GAME IN DENVER

THE DICTIONARY GIRL.—We are "way out West," and the sun does not reach us so quickly as it does Eastern readers; other good things as well are sometimes late in reaching us, hence this new game to us may not be new to others. Have you ever had "The Dictionary Girl" as an evening's entertainment? If you have not you will be repaid if you try it at your earliest opportunity. Like all other entertainments that are really entertaining it must be prepared beforehand. It takes but a short time, as I know from experience, to copy the requisite number, one for each expected guest. It is much better to have these copies made on a type-writer if possible. The game explains itself. The list of girls is given out, with space opposite for their names. To the one naming the greatest number of girls correctly a pocket-dictionary is given as a prize. A primer is presented to the "booby."

A disagreeable girl—Annie Mosity.
A sweet girl—Carrie Mell.
A big-hearted girl—Jennie Rosity.
A smooth girl—Amelia Rate.
A clear case of a girl—E. Lucy Date.
A geometric girl—Polly Gon.
A not orthodox girl—Hettie Rodox.
A rich girl—Mary Gold.
A nice girl—Ella Gant.
A flower girl—Rhoda Dendron.
A musical girl—Sarah Nade.
A profound girl—Metta Physies.
A star girl—Meta Orie.
A clinging girl—Jessie Mine.
A nervous girl—Hester Ical.
A muscular girl—Callie Sthenies.
A lively girl—Annie Mation.
An uncertain girl—Eva Nescent.
A sad girl—Ella G.
A great big girl—Ella Phant.
A warlike girl—Millie Tary.

ELLA BARTLETT SIMMONS.

WASTING AWAY

AN ATHLETE'S SAD FATE

This is the story of a strong man. He had been captain of his foot-ball eleven and a crack all-around athlete. He was the picture of manly health and vigor, envied by men and admired by women. One day he was taking a practice spin on the river when a drenching storm came up. When he returned to the boat-house he sat around in his wet flannels without a thought of danger. What could hurt him? He was "as hard as nails." After awhile he develops a little hacking cough which somehow won't be thrown off. In time he finds he hasn't the ambition he formerly had. Exercise wearies him. He is losing weight. It is not very long before he finds himself weak and emaciated, stretched out in a chair



knowing that he is wasting away day by day and hour by hour. It seems a long way from that chair to the grid-iron and the diamond, a great change from that dripping athlete in the boat-house to this weak and wasted invalid. But the way is indeed very short. It is a way which thousands tread every year, and the beginning of the way which leads to such a sad ending is

A TROUBLESOME COUGH

No man or woman is so strong as to be able to treat lightly an ailment which is the beginning of such a serious disease. There is a cure for coughs however stubborn, and that cure is Doctor Pierce's Golden Medical Discovery.

"I am feeling quite well," writes Miss Dorcas A. Lewis, of No. 1129 24th Street, Washington, D. C., "and I owe it all to Dr. Pierce's Golden Medical Discovery. I cannot say too much in praise of the medicine. I had been quite a sufferer for a long time, and after reading Dr. Pierce's Common Sense Medical Adviser thought I would try his 'Golden Medical Discovery.' I commenced taking it in May, 1899. Had not been sleeping well for a long time. Took one teaspoonful of Dr. Pierce's Golden Medical Discovery and slept nearly all night without coughing, so I continued taking it. I am in great sympathy with everybody who suffers with a cough. I had been a sufferer for more than ten years. I tried lots of different medicines and different doctors, but did not feel much better. I coughed until I commenced spitting blood, but now I feel much stronger and am entirely well. Dr. Pierce's Golden Medical Discovery is the best medicine I have ever taken."

"Golden Medical Discovery" is not to be classed with ordinary "cough medicines." When the cough has been obstinate and deep-seated, when there have been weakness, night-sweats and emaciation, the use of Doctor Pierce's Golden Medical Discovery has been the means in hundreds of cases of a restora-

tion to perfect health. The reason for this success is that the "Discovery" strengthens the stomach and purifies the blood, thus enabling the building up of the wasted tissues. All treatments of consumption recognize the need of nourishment. The use of cod-liver oil is only an attempt to impart nourishment and so strength to the wasting body. The oil is a food, but it is an emergency food. In its very form it recognizes the weakness of the stomach. "Golden Medical Discovery" strengthens the stomach, so that food is digested and assimilated. The body begins to put on healthy flesh, and strength comes back again.

FOUNDED ON FACTS

The claims made for "Golden Medical Discovery" are not imaginative or theoretical. Every claim of cure is founded on a solid fact, a written record, of the cure of deep-seated coughs, weak lungs, hemorrhages, emaciation and other forms of disease which if neglected or unskillfully treated find a fatal termination in consumption.

"I had a cough and night-sweats, also spitting of blood; no life," writes Mrs. M. A. Cary, of (Indian Hd.) Blackwood, Assiniboia Dist., N. W. Ty. "I could not hold any weight; my shoulders would give way; had pricking pains in the chest, also nasal catarrh and constipation. I began using Dr. Pierce's Golden Medical Discovery, and for the first two or three days I seemed worse, and then all my nerves felt numb, as if they were being roused up. Used about ten bottles of 'Golden Medical Discovery,' nine of 'Favorite Prescription,' and four vials of Dr. Pierce's Pleasant Pellets, and six bottles of Dr. Sage's Catarrh Remedy. Now I have none of the old symptoms. I am so far as well as ever before. I shall recommend Dr. Pierce's medicines to my friends."

Dr. Pierce's Golden Medical Discovery is confidently recommended for pulmonary diseases and diseases of the organs of respiration generally. It always helps. It almost always cures. It is not a tonic merely, but a flesh-forming, body-building medicine, containing no alcohol, and being absolutely free from opium, cocaine and all other narcotics.

FREE TO THE SICK

Persons suffering from disease in chronic forms are invited to consult Dr. Pierce by letter, free. All correspondence held as strictly private and sacredly confidential. Address Dr. R. V. Pierce, Buffalo, N. Y.

Sometimes a dealer tempted by the little more profit paid by less meritorious medicines will offer a substitute for "Golden Medical Discovery," claiming it is "just as good." Do not allow yourself to be imposed upon. Insist on getting the "Discovery."

WHAT OUGHT TO BE

Frank J. Smith, of 413 Van Siclin Avenue, Brooklyn, N. Y., says: "The Medical Adviser ought to be in every household. I have already got some very valuable information from it which alone has more than paid for the cost of the book."

This great work, containing 1008 pages and over 700 illustrations, is sent free on receipt of stamps to pay expense of mailing only. Send 31 one-cent stamps for the cloth-bound volume or only 21 stamps for the book in paper covers. Address Dr. R. V. Pierce, Buffalo, N. Y.

Employment

that nets \$50 to \$125 a month. The work is light and pleasant, town or country, traveling or at home. No gentleman or lady of fair business ability but can succeed in it wherever the English language is used. No investment, no risk. Special inducements N.W. Address R. Hannaford, 125 Times Bldg., New York.

FARM SELECTIONS

CUTTING AND CRUSHING STALKS

THE STALK NUISANCE.—A man may raise his corn and cure it in the manner described in my former articles, giving it the very best of care, and upon placing it before the stock will find an immense amount of waste, especially with large corn, while the butts remaining in the manger will be a great nuisance. Until four years ago I lugged them out in great quantities. They were a sore trial from beginning to end, and I have several times been so disgusted that I burned great heaps of them. In the year of the short hay crop in this section I purchased a ten-inch cutter, and undertook to cut stalks for a ten-cow dairy by hand, and after cutting enough for two nice meals I considered one experience sufficient to advise against trying any such foolish operation. But lugging corn-stalk butts ceased to be a virtue. I saw the picture of a machine in a catalogue, studied its principle, decided that it ought to be far ahead of any ordinary cutter, and sent an order for an outfit consisting of a two-horse tread-power and a twelve-inch cutter and crusher. Do not get the idea confused with a shredder; it is nothing like one. The outfit arrived in due season, and was placed in position for business. For a long time it was like the "one-hoss shay," a wonder and nothing less. People came, and have kept coming from far and near to see it in operation.

HOW THE MACHINE WORKS.—I will explain for the benefit of those who do not know that this machine cuts the stalks the same as any cutter; then they fall into a rapidly revolving cylinder running above a concave, as in a threshing-machine, sharpened spikes on both cylinder and concave running close to each other. The shell, or outside part, of the stalk is torn off and broken up, usually leaving the pith in cylindrical form. Ears large or small on the stalk make no difference, except to take a little more power to run the machine. One can simply detach one wheel that drives the crusher, put in a board that comes with the machine, and you are ready to cut hay or straw as with any ordinary cutter. Hay or straw, being fine and light, will clog if run into the crusher. Green stalks can be cut and crushed the same as when dry. I will give briefly my method of feeding cut and crushed stalks, thus answering questions frequently asked me.

SUCCESSFUL FEEDING.—In the first place, does the fodder go any farther, and if so, to what extent? In the old way of feeding I gave each cow three large bundles of stalks a day, and all know about how much would be waste. With early-cut, well-cured corn-fodder run through the cutter and crusher the cattle will eat ninety-five per cent until about the middle of February; from that time on they do not like the stalks so well. I feed each cow three bushels a day, which is about all she will eat clean. A good average bundle of stalks will make one and one half bushels when run through the machine. A good many farmers have had their entire crop of stalks cut in the fall and piled up in the mow, where they are sure to heat and mold. Nine out of ten inexperienced men will say that heating will soften and make them better. Don't you believe it! I do not like to have my cut stalks even heat. The cows will eat them best when cut fresh every day. I have a room in my basement large enough to contain cut stalks for fifteen cattle for eight or ten days, but I cut twice a week all winter, and the crushing part is as much ahead of the old way as the old way was ahead of not cutting at all. To say I am pleased with what was at first an experiment is putting it mildly.

TREAD-POWERS are fast coming back into general use, and I believe them to be the power for a farmer. Most people know little about them, and then only of the old-fashioned kinds. There is as much difference between the modern tread and the one of twenty-five years ago as between mowing-machines compared the same way. Many people are prejudiced against putting

a horse in a tread-power, and speak of accidents known to have occurred years ago. That is all done away with now. I once tried putting the bull in the tread, but where one has any amount of work and good horses he would better not bother with an animal so stupid in this direction as a bull. If in need of any amount of power it could not be acquired without two, three or four year old bulls, and a man will fool away some time before he gets them to work without constant attention. Another requirement for an animal to work in a tread is to be properly shod. It is no trick at all to get a horse to work in a tread. Put him in the first few times fully harnessed, and one at a time. Have one man tend the brake, while you walk in the tread by the side of the horse, to give him confidence, being gentle with him, governing the motion until he has acquired the proper step, which usually takes from about fifteen to thirty minutes. Be very careful not to scare him at first, and the most spirited horses often make the best treaders. The only real difficulty is in the horses crowding sometimes when two are put in together. Teach each one separately. They very soon learn to go in and out easily, and work with the tie-strap entirely free. Risk of accidents is almost entirely obviated by the use of the patent governors. A horse is not injured in the least for any other occupation, but gets much needed exercise in winter.

FACTS ABOUT IT.—The first cost of a good tread-power is considerable, but once acquired it costs nothing for fuel, and as it is nearly always used in cold weather you do not need to wait to get up steam; water does not freeze or pipes burst, but it is always ready, and with proper care will last a lifetime for farm use. On green stalks my two-horse tread will run a twelve-inch cutter to its full capacity with one horse. Two horses in the power will run a sixteen-inch cutter and twenty-four feet of carrier full capacity. A twelve-inch cutter and crusher is right for a two-horse tread on dry stalks. The power is gained entirely from the weight of the horses. The larger the horses the more power acquired. One horse will run a large-size corn-sheller elevator and bagger. Have your mill, and grind any and all kinds of grain with it before you can get started for town, and where one grinds twelve or fifteen hundred bushels of grain each year it is a great saving. I am especially pleased with this part of the program. There is the same power in a modern two-horse tread as in a four or five horse sweep-power, while it has the advantage of being entirely under shelter and may be used largely on stormy days. I now cut all my wood with buzz-saw, using one horse on all sticks up to three and four inches in diameter, and two horses on the larger wood only. If one gets the power, the remainder can be added from time to time at a comparatively small additional cost. The entire outfit can be operated on a floor space twelve by twenty-four, but a little larger each way would be better, say sixteen by thirty.—H. S. Wright, in Rural New-Yorker.

A START IN BREEDING

A great many people who would like to get some pure-bred live stock, especially beef-cattle, are deploring the fact that they were not ready to buy them a few years ago, when they were so cheap. But a shrewd observer of human nature will note that ninety-five per cent of these "regretters" never would and never will buy anything when it is under the cloud of depression. It is a fact that very few breeders of live stock begin when they can buy their stock the cheapest—when it is in the slough of despond. The incentive to begin is lacking then; the enthusiasm is not in the air. Good times and enthusiasm among breeders are the means of starting many a man in what will be to him a profitable business. He can afford to pay something extra for a start under these circumstances. He cannot afford to wait until the depression comes, for then, nine times out of ten, he will not start at all. And then, too, it looks like he might have a good while to wait.—National Stockman and Farmer.

JERSEYS NOT IN A "TRUST"

A marked feature of American agriculture of the present time is the large number of money men who are buying and fitting out farms and plantations. This movement is separate from and unlike the enormous cattle-ranches and wheat-farms out West, which are purely commercial. These new enterprises are not, primarily, commercial or even speculative. The money that may be made out of them is a secondary consideration, if a consideration at all. They are started as a means of gratifying their owners' pleasure or pride. On many of these farms residences costing vast amounts of money are being erected as country homes, or, rather, as summer residences. Along with these residences every known comfort, convenience and luxury are added.

Naturally different men prefer different lines of farming and stock-breeding. Heretofore the most popular have been trotting and pacing horses, although the Jersey cow has always held a favorite place. Of quite recent years it is coming to be quite the thing for rich men to establish Jersey herds. This fashion is making a first-rate market for first-class Jerseys, and is putting much life into the Jersey business. If these herds were in every instance to be handled at first hand by their owners it would be a sad thing for the cattle; but as each one of the owners employs a thoroughly competent herdsman to take care of his cows the establishment of these herds will undoubtedly prove a good thing for the Jersey business.

Happily, the Jersey cow cannot be monopolized or her qualities corralled into a trust. The owner of a single cow does not have to ask any favors of the owner of hundreds. Kindly care and plenty to eat are all she asks of any one. Therefore, it is to be hoped that each one of the rich men who sets up a country place will buy himself a good-sized Jersey herd and establish a marble-walled dairy. The more such herds we have the greater the demand for high-class Jerseys and the better for the breeders of to-day. There is no danger of the business being overdone. There is room for several millions of good Jersey cows throughout the land.—Jersey Bulletin.

TWO GOLDEN APPLES

The Grimes' Golden and the Stuart's Golden are two apples well named. I do not know that the Stuart is sufficiently tested so that we can know to a certainty how it will succeed in different soils and climates, but it is certainly doing well in Ohio and Pennsylvania. I cannot yet find out where it originated, but it was probably in Ohio. It is a medium-sized apple, coming into use about the first of December and continuing in use until April. It is remarkable for its keeping qualities and the long period throughout which it is in good eating condition. It is very juicy, crisp, rich-flavored, with a light-yellow flesh, small core and very clean stem and blossom ends. The color is a light but bright yellow, with a crimson cheek. The size of the apple, although not the largest, is large enough for a good table-fruit. In general it resembles in color Maiden's Blush, but does not average quite so large. It is simply delicious in December, and very good throughout the season.

Grimes' Golden I know more about, and can speak with certainty as to its adaptability. The wood of the tree is exceedingly clean and apparently very hardy. But very hardy it is not. It winter-kills so badly that my advice is to graft it on old trees. The fruit is of the very highest rank. As a cooking-apple it comes closely after the old Spitzenburg, and might be preferred to that variety. As a dessert-fruit it is rich, and in some respects resembles the Swaar. Not knowing to the contrary, I should imagine it a seedling of the Swaar. The apple grows to its largest size in lighter soils than we have in central New York. Here it needs cultivating and feeding, and then we get a fruit averaging not much larger than the Jonathan. It comes into good use about the first of December, and remains a grand dessert-apple until May without losing its high quality.

E. P. POWELL.

Bald Heads

A Sure Hair Grower, Prevents Hair Falling Out, Removes Dandruff, Stops Itching and Restores Luxuriant Growth to Shining Scalps, Eyebrows and Eyelashes

A TRIAL PACKAGE FREE

Those who are losing their hair can have it restored by a remedy that is sent free to all. A Cincinnati firm has concluded that the best way to convince people that hair can be grown on any head is to let them try it and see for themselves. All sorts of theories have been advanced to account for falling hair, but after all, it is the remedy



Mlle. Riva
Famous French Contralto

Geo. N. Thatcher
Prominent Ry. Official

we are after, and not the theory. People who need more hair, or are anxious to save what they have, or from sickness, dandruff or other causes have lost their hair, should at once send their name and address to the Altenheim Medical Dispensary, 1728 Butterfield Bldg., Cincinnati, Ohio, inclosing a 2-cent stamp to cover postage, and they will forward, prepaid by mail, a sufficient free trial package of their remedy to fully prove its remarkable action in quickly removing all trace of dandruff and scalp diseases and forcing a new growth of hair.

Mlle. Riva, 149 Avenue des Champs Elysees, the famous Parisian contralto, whose wonderfully luxuriant tresses add charm to a most bewitching personality, says: "I procured a set of the Foso remedies while touring the States and they actually caused my hair to grow anew. We have in Paris such a bewildering array of hair dressings it seems strange we must go to the States for one that will make the hair grow. I had for several years been losing my hair, had tried everything, and was finally obliged to wear switches to keep up appearances. I am happy to say that with the Foso remedies my hair is now more luxuriant than it ever was, and am thankful to feel that it is all my own and cannot fall off to embarrass me."

Geo. N. Thatcher, of Covington, Ky., a prominent railway official whose duties are very exacting, was rapidly losing all his hair. He says:

"I was getting so bald and such a shining mark for my friends that I was forced into using hair remedies. I tried a dozen or more before I ran across the Foso treatment, and am glad to say that I was well rewarded. My entire scalp is now thickly covered with long, dark hair of the natural shade, and I know beyond question that the Foso remedies caused this result. I do not hesitate to lend my name and influence to these thoroughly trustworthy hair-growers."

Write to-day for a free trial package. It will be mailed securely sealed in a plain wrapper so that it may be tried privately at home.

The remedy also cures itching and dandruff, sure signs of approaching baldness, and keeps the scalp healthy and vigorous. It also restores gray hair to natural color and produces thick and lustrous eyebrows and eyelashes. By sending your name and address to the Altenheim Medical Dispensary, 1728 Butterfield Building, Cincinnati, Ohio, inclosing a 2-cent stamp to cover postage, they will mail you prepaid a free trial of their remarkable remedy.

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FARM SELECTIONS.

FALL TREATMENT OF TREES INFESTED WITH THE SAN JOSE SCALE

THE rapid and unusual development of the San Jose scale during the past hot summer calls for all the enterprise and energy of the fruit-grower who is so unfortunate as to have it on his place to keep it in check. This is a matter of very grave importance, and nothing should be left undone to apply the most effective remedy in every case of infestation.

After a very careful study of conditions over a wide area of the United States, and the completion of many experiments, the writer makes the following recommendations for immediate action:

1. All badly infested trees, of whatever variety, should be grubbed out without delay. Pile the brush and wood where the tree stood, but do not burn until next May or June. This is done to preserve the little parasites that feed upon the scale. If they are not destroyed these little friends can concentrate their attacks upon other moderately infested trees near by. The scale cannot leave a branch or twig to which it is attached, therefore when the tree is cut down all the insects die with the drying out of the sap, while the parasites escape and fly to other trees.

2. Spray all suspicious trees with a ten-per-cent mixture of kerosene (ordinary coal-oil) and water before the leaves fall and while the pest is still active and breeding. The scale will continue to breed until checked by cold weather. We have observed the young crawling as late as December nineteenth. Do the work thoroughly, and see that you touch every part of the tree, as the spray kills by contact only.

3. Select a calm, sunny day for the spraying, if possible. Use either a Deming or Gould kerosene-sprayer. They are made especially for this kind of work, and mechanically mix the kerosene and water in the right proportion.

4. Late this fall, after the foliage is off, whale-oil soap, at the rate of two pounds in one gallon of water, can be used on pear and apple trees; but it is not recommended for peach and plum trees. It can be used, however, to wash the trunk and larger branches of peach and plum trees, but must not come in contact with the fruit-buds, as it will kill them.

5. Crude petroleum has been recommended by some writers, but we do not feel warranted at present in commending its use. In Georgia the past summer the writer saw serious injury done to peach-trees where a ten-per-cent mixture of crude petroleum and water was sprayed. On an adjoining row, however, where ten-per-cent refined kerosene was used no apparent injury resulted.

The main object of fall spraying is to break up the scattering of the late broods. This having been accomplished, the spray can be repeated again next spring, just before the buds begin to swell, with a twenty-per-cent mixture of kerosene and water. This can be applied to peach, plum, pear, apple and other trees at that time without injury to the tree or fruit-buds. Last spring we sprayed over ten thousand trees with very good results. This stronger mixture must not be applied in the fall, winter or on a misty or damp day. It is a spring treatment for use just as the sap begins to rise and the tree begins to take on new life.—Bulletin of Maryland Agricultural College.

TOBACCO CULTURE IN THE UNITED STATES DURING THE CENTURY

Tobacco culture in the United States during the nineteenth century is the subject of an interesting article published in the century issue of "The United States Tobacco Journal." It gives many interesting facts and figures and shows what great strides have been made in the cultivation of the tobacco-plant. During the first forty

years of the century the industry made giant strides in Virginia, Maryland, Kentucky, Tennessee, North Carolina, Missouri, Ohio and Indiana, and each of these states raised crops of millions of pounds in 1839. In 1890 the total crop amounted to 488,256,646 pounds, of which 221,880,303 pounds were raised in Kentucky. 48,522,655 pounds came from Virginia, and other states were credited with the following product:

	POUNDS
Ohio	37,853,563
North Carolina	36,375,258
Tennessee	36,368,395
Pennsylvania	28,956,247
Wisconsin	19,389,166
Maryland	12,356,838
New York	9,316,135
Missouri	9,424,823
Connecticut	8,874,924

A table in the same publication gives figures in connection with the production of cigars. In 1873 there were 15,322 cigar-manufacturers in the United States. They produced 1,779,946,596 cigars, and on these a tax was paid to the government of \$8,899,732. In 1898 the number of manufacturers had grown to 30,856, the number of cigars produced was 4,910,937,307, and the tax on these amounted to \$14,031,726.

The capital invested in the cigar business in 1890 is given as \$59,517,827; number of hands employed, 98,156; wages paid, \$44,767,989, and the value of product, \$129,693,275.

The writer of the article gives Christopher Columbus credit for having been the first white man to note the existence in the Western hemisphere of the tobacco-plant, and quotes the following from an old history on the subject:

"Although the fact has been controverted, there can be no doubt that the knowledge of tobacco and its uses came to the rest of the world from America. In November, 1492, a party sent out by Columbus from the vessels of his first expedition to explore the island of Cuba brought back information that they had seen people 'who carried a lighted firebrand to kindle fire to perfume themselves with certain herbs which they carried along with them.'"

Thus, in the earliest historical notice of tobacco we find it classed as a popular perfume, and although its many other attributes have since been recognized, the delightful odor of the burning Cuban leaf is still one of its most marked peculiarities. In awarding the palm to Columbus for the discovery of tobacco as well as of America the picturesque story of how Sir Walter Raleigh was the first to note the existence of the weed must be rejected, together with the claims of other aspirants for this honor; but surely no one will grudge the great navigator the distinction accorded him, even though it is not clear that he carried back to Europe with him any of the wonderful "herbs" he found in Cuba.—New York Tribune.

A RICH MAN

A writer in the "Outlook" describes a ride he once took with an old farmer in a New England village, during which some of the men of the neighborhood came under criticism. "Speaking of a prominent man of the village, I said, 'He is a man of means?' 'Well, sir,' the farmer replied, 'he hasn't got much money, but he's mighty rich.' 'He has a great deal of land, then?' I asked. 'No, sir, he hasn't got much land, either, but he is mighty rich.' The old farmer, with a pleased smile, observed my puzzled look for a moment, and then explained. 'You see, he hasn't got much money, and he hasn't got much land, but still he is rich, because he never went to bed owing any man a cent in all his life. He lives as well as he wants to live, and he pays as he goes; he doesn't owe anything, and he isn't afraid of anybody; he tells every man the truth, and does his duty by himself, his family and his neighbors; his word is as good as his bond, and every man, woman and child in the town looks up to him and respects him. No, sir, he hasn't got much land, but he's a mighty rich man, because he's got all he wants.'"

THE COST of producing a pound of pork increases with the age.—Maryland Experiment Station.

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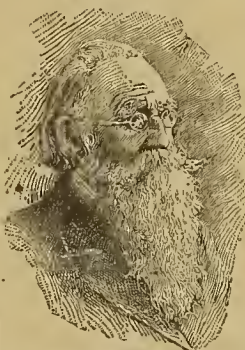
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DR. J. M. PEEBLES
received through Dr. Peebles' treatment. She suffered

for years from falling of the womb. Francis Waverling, Seattle, Washington, suffered for twenty years with a severe case of Catarrh; completely cured through the psychic treatment. Geo. H. Weeks, 53 Minerva Street, Cleveland, Ohio, sends heartfelt thanks for restoration of health after suffering from nervous prostration and insomnia; says he now enjoys restfulness and sleeps sound every night. Mrs. Mary A. Clair, Lexington, Kentucky, after thirty years' continual suffering from epilepsy and trying to be cured by eminent physicians, writes: "Two months of your treatment has made earth almost a heaven to me." To all the sick Dr. Peebles makes this liberal offer: Don't send any money, simply your name and address, also leading symptoms, and through his psychical power he will diagnose your case; you will also receive, free of any cost whatever, special instruction and his wonderful books, which mean health and strength to you. Address Dr. J. M. Peebles & Co., Battle Creek, Michigan.

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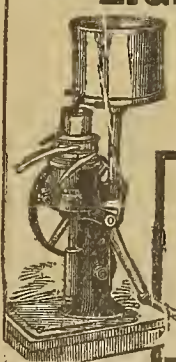
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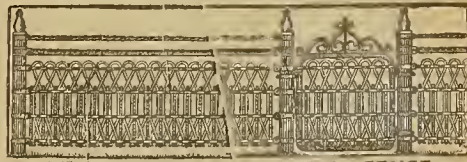
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SELECTIONS

A PIN-FACTORY

IT REQUIRES an average of more than twenty million pins a day to sustain the falling skirts, replace the missing suspender-buttons, and meet the other needs of the American people. What becomes of all these pins is a question that nobody has been able to answer, but there is no falling off in the demand, so that this number must disappear in some manner every day.

It is hard to imagine anything simpler than a pin, and it is a striking proof of the complications of our modern industrial system that every pin in the course of its manufacture passes through a dozen separate processes, involving the greatest skill on the part of the operatives employed and the action of a great amount of automatic machinery.

The pin makes its appearance at the factory in the form of barrels of coiled brass wire. The first process is that of straightening this wire. The coils are placed on revolving racks, and fed from these into little machines, from the vise-like grip of which they emerge perfectly straight. Thence the wire is fed into the pin-making machine, which is almost as complicated as a printing-press. A sharp knife cuts the wire into lengths of the desired size. As each little length of wire drops from the knife it falls upon a small wheel, the edge of which is notched into grooves just large enough to hold the bits of wire.

Each piece is carried along by the wheel until an iron finger and thumb seize and hold it firmly, while an automatic hammer, by a single smart blow, puts a head on one end. Then the embryo pins fall upon another grooved wheel, which revolves horizontally. As they move on in the clasp of this second wheel the projecting ends pass over a number of circular steel files, which neatly grind them to a point. Further on they encounter a pumice-stone, which smoothes off the filed ends, and then they drop into a wooden receiving-box. So far no workman's hand has touched the pins in their progress from the reel. The cutting, heading, smoothing and pointing has all been done by the wonderful automatic machinery.

From the wooden boxes the pins go to the "whitening" room, where they are cleaned in revolving barrels filled with sawdust, and receive a nickel coating in big vats. Then they are dried in the sawdust barrels and are run through a "sorting" machine. It is impossible to get the better of this machine.

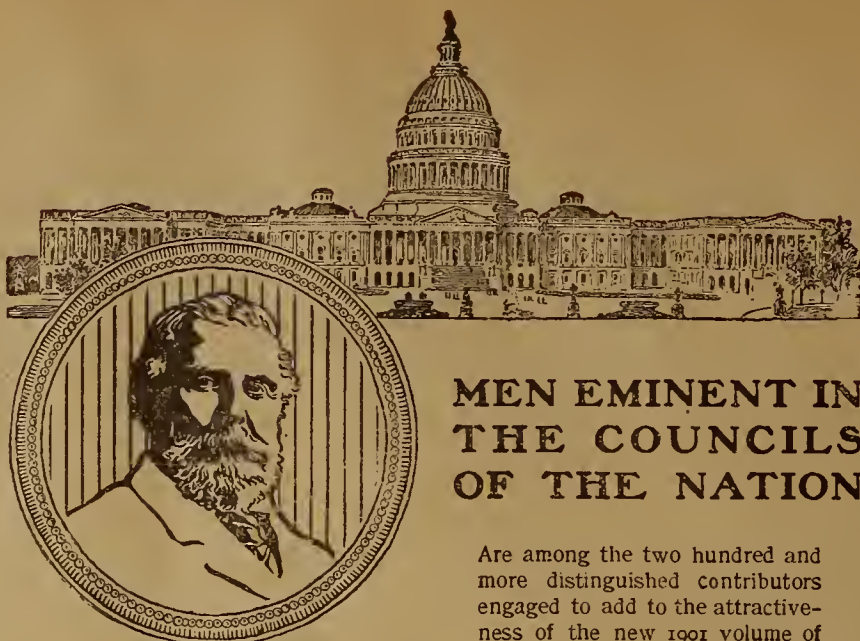
The big department stores and wholesale dealers buy their pins by the case. A case contains one hundred and eight dozen papers, three hundred and sixty pins in each paper. A single order from the largest stores usually calls for one hundred cases, or nearly fifty million pins.—Chicago Journal.

FISHING WITH BIRDS

In this country the fisherman is a man that uses hook and line or the net in following his profession, and folks would stare with wonder to see him start off with a flock of birds to help in catching fish. Yet this is done in China. There the Chinaman may be seen in his sampan surrounded by cormorants that have been trained to dash into the water at his order, seize the fish and bring them to the boat.

If the Chinaman wishes to catch turtles he will do so with the aid of a sucking-fish, or remora. This fish has on top of its head a long disk, or sucker, by which it attaches itself beneath moving objects, such as sharks, whales and the bottoms of ships, rather than make the effort for independent movement.

The fisherman fastens the remora to a long cord tied to a brass ring about its tail, and when he reaches the turtle-ground puts it overboard, taking care to keep it from the bottom of the boat. When a turtle passes near, the remora darts beneath him and fastens to his shell. Struggle as he will, the turtle cannot loosen the grip of the sucker, and the Chinaman has only to haul in on the line and take him aboard.—Chicago Daily News.



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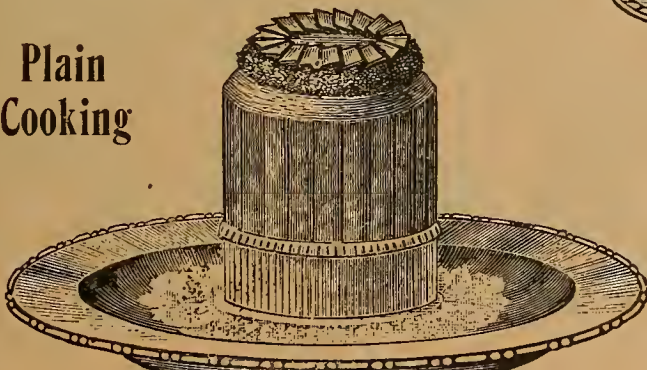


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The natives have peddled out their vegetables, milk, etc., in large part to the American soldiers



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A GLIMPSE OF THE PARIS EXPOSITION

By Edward A. Steiner

PARIS, gay old Paris, staggered many a staid Yankee who stepped upon her clean but slippery pavement during the recent Exposition. Whether you came by day or by night, the spotters spotted you, and male and female rascals were after you, and fleet indeed must be the feet of him who escaped their contaminating touch.

Coming by the way of Cherbourg, we traveled through Normandy, the finest farming country of France, and we stared with hungry eyes upon quaint villages and quainter cottages, upon vast stretches of rich meadows, where full-uddered cows were grazing and anxiously waiting to be relieved of their wealth of milk.

About three o'clock in the morning we reached Paris, and our sleepy eyes opened with the freshness of a restful morning as we gazed into the sea of light which circled us, and which was beginning to be touched by the faintest streaks of morning's red. Leaving the station, we were astonished to find Paris still awake; not noisily wakeful, but drowsy and ready for a little nap. We decided to remain on the street and watch the ebbing life of the great city. Cabs were rolling over the broad Boulevard, whose occupants seemed unconscious of the fact that six Yankees, travel-stained and hungry, were gazing upon them. The chairs upon which gay crowds had been seated were now taking their rest, and a few of them edged up to the street seemed to tell one another their experience of the past night. Oh, and what a story it was! Upon the benches which flank the promenade were those fortunate Parisians who occupied the city's sky-parlors for the night, and who, no doubt, dreamed of the past glory of the empire and were revelling in these shadowy but gorgeous reminiscences. Nor were the streets empty yet of those women who, like hungry buzzards, seek for carrion. On the contrary, they swarmed in certain portions of the Boulevard, still gay, still graceful, though no doubt weary and half asleep. We reached the church of the Madeleine, and entered in the early-morning hour this temple more Greek than Christian, bowing our heads reverently before our common Lord and Helper, who no doubt looks pityingly upon this city, which is also more pagan than Christian. As we came away from our quiet moment with God there stretched before us the Place de la Concorde, at the foot of the Avenue de Royale. The obelisk, strange witness of a dead past, lifted its gray finger heavenward, while the sun came from his journey to his Eastern homeland, and brought greetings from the pyramids, the sphinx and the deserted temples on the Nile. Still further across the Seine rose the gilded tower of the Church des Invalides, where, in his marble sarcophagus, sleeps the man who dreamed of universal conquest, and who brought from its native place the Egyptian column, just as he gathered

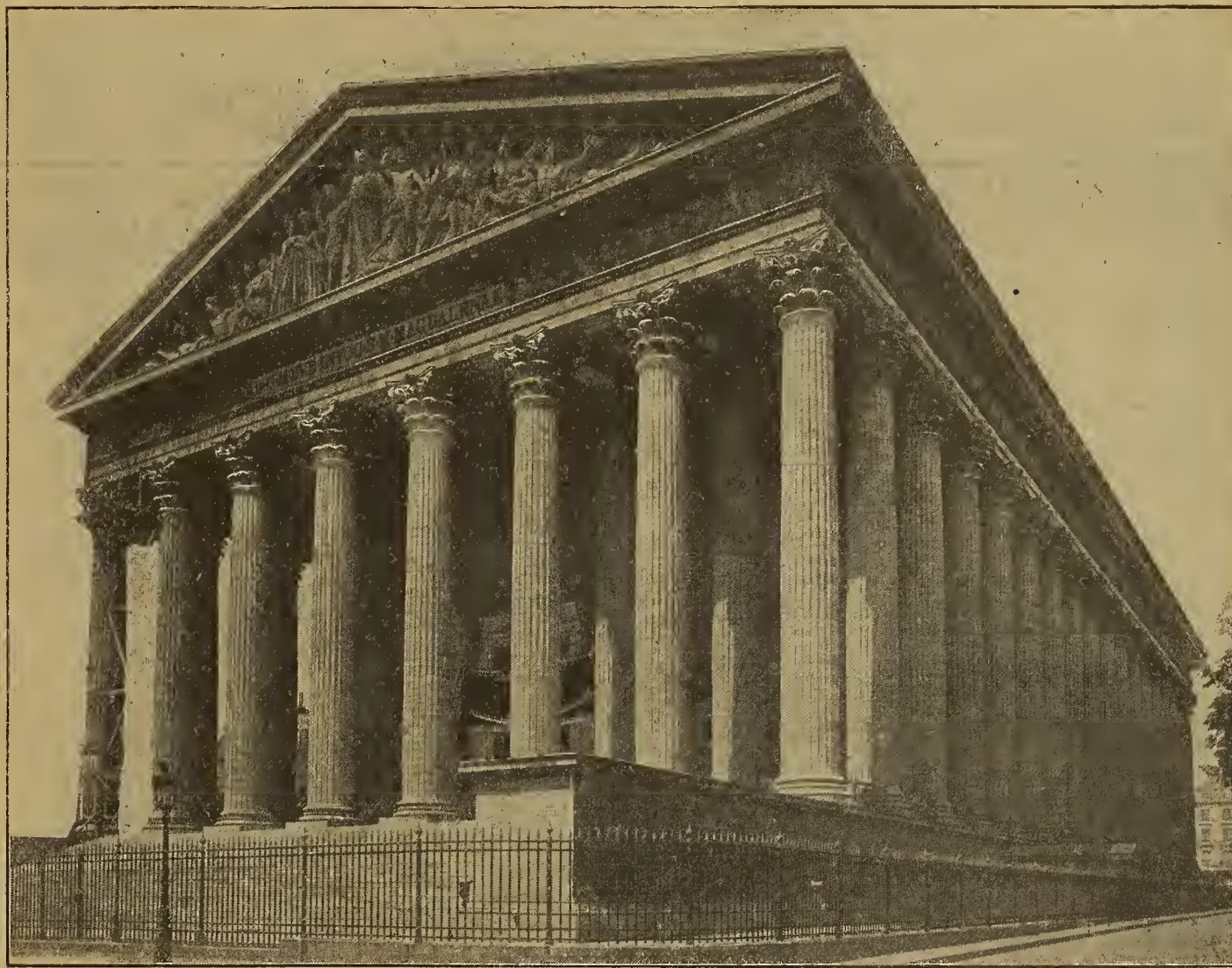
with covetous touch treasures everywhere regardless of their ownership and sacred surroundings.

Between the two rises the main entrance to the Exposition, a strangely out-of-place kind of ornament, which is neither flesh nor fish, neither gate nor arch, but which is a legitimate child of that often misguided mother, "modern art."

Ticket-sellers around the entrance were as thick as dandelions, and you could purchase the piece of pasteboard which was the "open sesame" to this heaped-up wealth anywhere from ten to six cents—American money—the price being lowest when the temperature was highest, and vice versa. The original price of tickets was twenty

but a poor showing, and when one looked at the pile which we dignified by calling it a national building one wondered whether the money spent by the people of the United States was not ornamenting some man's private pocket, for certainly it did not ornament the Paris Exposition. Side-shows crowded in wherever they could, and you seldom knew "where you were at," vulgarly speaking. There were buildings, where huge guns crowded one another, where this nineteenth century displayed her art in killing men. A hundred, a thousand bullets a minute, they said, and I rather stood behind these monsters than in front of them. There were other buildings where you could travel around the whole world in

hundreds of models of harvesting-machines, beginning with the one used by the ancient Gauls up to our own modern machinery, and it took the conceit of one in the realization of the fact that thousands of years ago the farmers had some ideas upon which we have not improved very much. Of course, there was the usual display of grains and grasses from the Argentine Republic, from Siberia and Dakota, and from the Hungarian plains by the Danube, and the great rivals in the wheat market of the Old World were striving here to display their superior points one over the other. It was asserted by some of the men whom I met around this display that the Hungarian wheat is a superior article, and that the Amer-



MADELINE CHURCH

cents, and they were sold in the shape of shares to the citizens of France, who bought them as good investments, but who found that a few people remained in the United States and elsewhere, and that millions of tickets were a whole lot and hard to get rid of, especially when mercury was near boiling-point.

The first day we paid six cents to go in, and we walked through avenues flanked by finest statuary, through palaces of art, where the nations' artists vied with each other in friendly rivalry; along the Avenue of the Nations, where the characteristic architecture of the world mingled, but seldom in friendly harmony. Italy, bankrupt Italy, still is queen of artistic taste, and her building was by far the finest piece of architecture on the grounds. America made

an hour for about twenty cents, and again others in which you could see women's dresses of all the centuries and from all the nations; and over most of the huge glass cases which harbored these "creations," as the women liked to call them, you might appropriately write, "What fools these mortals be!"

Art, war, dress and travel sank into insignificance as we entered the Agricultural Building, which represented neither waste nor cruelty, neither luxury nor curiosity, but which pictured the honest toil of the world through the slowly moving centuries.

There were farm-houses from everywhere—from Normandy, from Siberia, from Dakota and from India—and wagons, horses and farm implements of all sorts and kinds. There were

ican A No. 1 hard is, in reality, No. 2 on the world's market. There were stacks of wools artistically heaped, and the stray grazers from many a barren meadow sent their contribution to man's welfare.

There were museums filled by plows, from the crooked stick which tickles the burned, hardened bosom of Mother Earth in some Oriental country to the graceful chilled-steel plow which moves like an iron bird over the prairies of the West. There were threshing implements, from the flails to the modern steam-thresher, and hours could have been spent in studying this exhibit. Around it gathered a crowd of farmers and farmers' wives from everywhere, and each recognized with a smile his [CONCLUDED ON PAGE 6 OF THIS ISSUE]

FARM AND FIRESIDE

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"THE Grout Bill," says the "National Grange Bulletin," "which is scheduled for consideration in the lower branch of Congress December 6th, is endorsed by the grange, and is receiving great attention in the agricultural press of the country, representing the great dairy interests, because this bill, if enacted into law, will prevent most of the fraud and deceit now entering into the use of imitation butter, whereby the manufacturers derive an immense profit and the consumers a corresponding loss, in addition to the immense loss entailed by the dairy interests under the present regulations. It should be kept constantly in mind that the Grout Bill is in the interest of those who desire to purchase and consume the product known as oleomargarine, as well as in the interest of those making pure butter. This fact has not been made sufficiently prominent in the public discussion of the matter."

"The present law requires the payment by the manufacturer of a tax of two cents a pound upon all imitation butter manufactured, while the Grout Bill reduces that tax to one fourth cent a pound when sold in its natural color. This reduction in tax, together with the lessened price on account of its being in the natural color, will reduce the price at which it will be purchased, and still yield a reasonable profit to the manufacturer and those who handle it, to one half of what it is sold for today. Is there any reason why a person who desires to use grease in the place of butter should not have the privilege of doing it at one half the present price and in equally as nutritious form? The discussion indulged in by the oleomargarine manufacturers and those working in their interests, in regard to the great injury the Grout Bill will bring upon the poor people who desire to purchase and to use imitation butter, is bosh, and only intended to throw dust into the eyes of the people and to put money into the pockets of the oleo-

dealers. The Grout Bill is in the interest of every person who desires to consume oleo or who desires to purchase it for legitimate uses.

"The Grout Bill imposes a tax of ten cents a pound upon this imitation product when colored to resemble pure butter, and it is claimed by those who have investigated the subject that this can be complied with and still allow it to be sold at present prices. This would transfer the eight cents a pound additional revenue from the oleo combine to the government, and leave the consumer as well as under the present law. It is no wonder that the manufacturers of bogus butter that are at present reaping such enormous profits are vigorously opposing the Grout Bill; but it is a wonder that they are able to enlist the support of intelligent men under the plea that it is in the interest of the 'poor people,' who still want the privilege of paying twice what an article is worth, simply because it is colored to represent an article that costs twice as much to manufacture, and from that deceptive color commands an exorbitant price and pays tribute to the parties perpetrating the fraud. These may not be the prominent reasons that cause the activity among the agricultural people in favor of the Grout Bill, but they are worthy of consideration by legislators who desire additional reasons for supporting the Grout Bill. Opposition to this bill is in the interest of no one except the oleo-manufacturers and the oleo-dealers."

IN ONE of his interesting letters as special correspondent for an American newspaper syndicate Mr. Frank G. Carpenter tells how Chinese taxes are collected, as follows:

"The taxes of the Empire are collected by the Board of Revenue. This is one of the seven great departments of the government. It corresponds to our Treasury Department, and has to do with all financial matters. It will probably have charge of the national debt, and all matters of indemnity will be laid before it.

"The board of revenue is known as the Hu Pu. It has two presidents, one a Manchu and one a Chinese. It has four vice-presidents and from six to eight directors. It has its superintendents, secretaries, assistant secretaries, comptrollers and clerks. It nominally levies all taxes and duties and pays all salaries and allowances. The mints are under it, and it has charge of the imperial factories, which are situated in different parts of the Empire. One of its bureaus, that of the three treasuries, is devoted to the storing of the metals, stationery, silks and dye-stuffs of the imperial family.

"The board of revenue sends out once a year to each of the provincial governments a statement of the amount it is expected to furnish the general government. To this must be added the local taxes, the civil and military taxes, and then the rate is fixed. After receiving the estimate the viceroy or governor gives his directions to the different officials. In many cases the taxes are farmed out successively by the higher officials to those beneath them, and so on, until they reach the men who actually get the money from the people.

"It is from this collection of taxes that the Chinese officials are able to pay such high prices for their offices. The real salaries are practically nothing, but the percentages which they can hold back from their collections make the high places exceedingly profitable. Some years ago a collector of customs at Canton was expected to send about \$1,000,000 to Peking, whereas the annual receipts of his office were known to be over \$3,000,000. This man probably had a salary of a couple of thousand dollars a year. The Chinese merchants of Hongkong told Lord Beresford that mandarins who had salaries of \$1,000 were accustomed to spend \$20,000 to keep up their establishments, and that viceroys who received but \$6,000 had often necessary expenses amounting to as much as \$75,000 a year. Notwithstanding this, such officials usually retired from their offices rich.

"The land-taxes of China could pay a big interest on three times any indemnity the powers will demand. More than this sum is annually collected, although out of it the government gets only 25,000,000 taels. China is a big country, and a vast amount of it is cultivated. If half the cultivated land were taxed at seventy-five cents an acre the gross revenue would be more than 300,000,000 taels. Let us estimate it roughly at \$200,000,000. Set aside \$25,000,000 instead of 25,000,000 taels for the government and you have still \$25,000,000 to pay the expenses of collection, and in addition the enormous sum of \$150,000,000, or four per cent on a loan of \$3,750,000,000. The powers cannot ask more than one fourth, or at the outside one third, this amount. The estimate of seventy-five cents an acre is very low, and this is on only one half of the cultivated land. It shows you what a surplus China might have without the addition of a tenth of one per cent to its tax-rate for government improvements if its officials were honest."

"A CENTURY of International Commerce" is the title of an article in the "North American Review" for November, by O. P. Austin, Chief of the Bureau of Statistics. The introduction reads as follows:

"Among the wonderful developments of the nineteenth century none is more marvelous than that of its commerce, which has increased more than a thousand per cent, while population was increasing less than one hundred and fifty per cent. This is due, in part, at least, to the fact that commerce has taken advantage of all the other wonderful developments with which the century is crowded. Ever watchful, ever alert, and ever willing to hazard expenditure for the sake of prospective gain, it has fostered, developed and adapted to its own use every discovery and invention which human energy, ingenuity and science have brought to the front. From the exchange of a few articles of luxury, carried on the backs of animals or in slow sailing-vessels, it has expanded until it now interchanges the products of all lands and all climes, utilizing the swiftly moving railway-train by land, and the scarcely less swift steamer by sea; and exchanges which occupied months at the opening of the century are now effected in days or weeks. Business messages then sent by carrier and sailing-vessels took a year to reach the Orient and obtain a reply, while now but a few minutes or hours suffice for a similar service. Purchases of goods which then involved a transfer of cash or commodities in which weeks or months were consumed are now arranged by telegraph and banks in minutes or hours, while the transfer of the merchandise is a matter of hours or days. From the narrow frontage of land along the ocean, or along watercourses whose products could enter into the commerce of the then known world, the seaboard has been extended landward indefinitely by the railway, while the carrying capacity and speed of the ocean vessel have been correspondingly increased. Instead of the pack-animal which could carry but a few hundred pounds, or the wagon which could at the best transport a ton of merchandise, the railway-car accepts as much as twenty teams could haul, and the engine hurries from twenty to thirty of these cars to the ocean, a thousand miles away, where the steamship calmly swallows the loads of twenty or thirty of these trains, and steams across the ocean at almost the same speed with which the merchandise was transported to the water's edge; while, before it had passed out of sight of land, the consignee on the other side of the globe has received notice of its departure, of the cargo carried and of the day and almost the hour at which he may expect its arrival."

IN A recent number of "Collier's Weekly" Governor-General Wood gives an interesting description of Cuba as she is to-day, from which the following extracts are taken:

"With the exception of one or two districts Cuba may be said to be fairly well reconstructed agriculturally and on the highroad to prosperity.

"The tobacco crop of last year was very large—one of the largest in the history of the island—and this year's crop will equal, if not exceed, it. The sugar crop in the present year will be in the neighborhood of 550,000 tons, and if the present price of sugar continues the amount of money realized will equal that received from the great crops of years gone by.

"The cultivation of coffee is being resumed in the eastern provinces, as is also the extensive cultivation of cocoa.

"Mining industries, especially in the two eastern provinces, are rapidly developing. This section of Cuba has an unlimited supply of very high-grade iron-ore, as well as large quantities of copper and oxide of manganese; also there are deposits of zinc and a very low grade of asbestos. In the province of Santiago there is still an enormous amount of very valuable timber.

"The commerce of the island is growing, as shown by the import duties. There is a great demand for labor from one end of Cuba to the other. Large plantations are being reconstructed, some of them costing \$1,500,000 for machinery and equipment alone. Land in the eastern provinces is cheap and of best possible quality. When it is remembered that probably not over ten per cent of Cuba was ever under cultivation at one time the possibilities of its future development can be appreciated.

"I know of no land where young men of moderate capital and industry have a better chance than in Cuba. The possibilities in the way of fruit-growing have never been even appreciated. Oranges of the finest flavor grow in the greatest abundance, and without any care. With proper cultivation the possibilities in this line are apparently limitless. Frosts are unknown, and there is a sufficient amount of rainfall to do away with need of irrigation. What is said of oranges is probably true of lemons and olives. Potatoes, onions and all kinds of garden truck grow with the greatest rapidity and in great abundance. The raising of cattle and horses can also be conducted very profitably in the island. The grazing is excellent, the grass being always in condition from one year's end to the other.

"Many important enterprises are now under consideration. Immigrants are pouring into the island, especially from Spain. These immigrants are mostly from the northern provinces, and are a hardy, industrious race of people, and will make good citizens.

"As to the climatic conditions existing in Cuba it may be safely said that one can live there with as much comfort as in any of our Southern states; and it is believed that as the reconstruction and development of the island progress the prevalent diseases will largely disappear.

"Yellow fever, of which so much is said, is not, after all, so much to be feared as is popularly supposed, and we have every reason to hope that in a few years, with careful attention to sanitation, and careful isolation of the diseased, Cuba can be made as safe for the European as Jamaica is to-day. It cannot be stamped out at once, nor is its removal the work of a single year.

"The reports of discontent, hatred of Americans and suspicion of the intentions of the American government which are so often seen in the press are absolutely incorrect. Cuba is profoundly tranquil and rapidly becoming very prosperous.

"The American army, through its officers, has been one of the greatest factors in the reconstruction of the country, and in the re-establishment of the present civil government the officers have taken up nearly every line of work with singular ability and unselfishness. The history of their work in Cuba is free from scandal, and will always stand to their credit. At present the army is practically removed from any active participation in civil affairs. The relations between the soldiers and people are friendly, and disorders are extremely infrequent, and such as do occur are only small disputes of a personal character."



ABOUT RURAL AFFAIRS

Pan-Americanisms It is worth making quite a trip to see the grounds of the Pan-American Exposition in Buffalo even in this stage of the work. No doubt this show is going to be the event of the times. Whoever has imagined that this show was to be simply a common local fair will be aware of his mistake as soon as he steps on the grounds, although much of it is still chaos and confusion. Some of the larger buildings, however, are already nearing completion, and the others are assuming shape; in all progress is made at a rapid rate. A few months ago the grounds were "full of emptiness;" now a veritable city is gradually rising out of the confusion, showing what American capital, American skill and American workmen can accomplish in the briefest span of time. It is now less than six months more to the opening of the Exposition (May 1, 1900); at the present rate of progress in the erection of the buildings it seems that there is no danger of failure in getting the whole thing completed and ready for visitors by the officially announced day of beginning. Ellicott Square in Buffalo, which is perhaps the finest office building in the world, occupying an entire block and having about one thousand offices in its ten floors above ground, and sheltering more people every week-day than are contained in many a city of the United States, was erected and completed for occupancy in less than a year's time; proof again of American enterprise and engineering skill. I believe the cost of this building was about three millions of dollars. Why should we fear that our workmen, with plenty of capital behind them, would not be equal to the task of completing the Exposition buildings in time? Yet when one looks at the present chaotic condition of the grounds in front, for instance, of the buildings for forestry, wines, horticulture and graphic arts, and compares their appearance with the pictures now being published of them as they will appear when ready for visitors after May 1, 1901, it seems hardly credible that the task can be accomplished; but it will. The men looking after the horticultural side of the big show are Frederic W. Taylor, Superintendent of Horticulture, Forestry and Food Products; William Scott, Assistant Superintendent of Floriculture, and G. Edward Fuller, Assistant Superintendent of Food Products.

Enough is already to be seen as the grounds now appear to enable us to make comparisons with the Chicago Exposition in 1893; that is, so far as their appearance as a whole is concerned. In Jackson Park we had the "white city"—yet hardly a "city," more a park—with mammoth palaces from old Greece or Rome, imposing in their majestic simplicity and whiteness, wide stretches of lawn, flower borders, extended lagoons and watercourses, etc., and an extensiveness of territory that often became tiresome to the visitor who came to see the objects on exhibition rather than grand scenic effects. In the Pan-American we will see a city, but not chiefly a white one. Those who wish to see beautiful sceneries or repose in contact with Nature's exhibits will have plenty of opportunity by going just outside of the Exposition grounds into Delaware Park, or to Lake Erie, or to Niagara Falls, only a half-hour's ride on steam-cars, or come to the spot where LaSalle built the Griffin (within a mile of where I am writing this) and enjoy a day's fishing or boating on the grand old Niagara, several miles above the cataract. But those who come to see industrial and electrical wonders, the great art exhibits, the greatest show of agricultural and horticultural products, etc., will be able to do so without overexertion to their pedestrian extremities. In Chicago we needed a day or two to "get our hearings." In the Pan-American we may go right to work seeing the sights. There is vacant space, and watercourse,

and ornamental planting, and the like, just enough for a variety and to set off the great buildings to the best advantage, but no more. The buildings are principally decorated with pretty and striking color effects. In short, the Exposition grounds at the present time present already one of the most interesting sights of the city of Buffalo.

Quick Effects Undoubtedly it is a big problem to have trees and shrubs on the Exposition grounds that will give satisfactory effects so shortly after planting. Some of the walks around the buildings are closely planted with common poplars. This usually is not considered to be a desirable street-tree; but it is a tree for quick effect, and undoubtedly just the one that is here required. Some months ago I mentioned that I cut down a Balm of Gilead tree which in eleven years from planting had reached a size of eighteen inches in diameter near the ground, and suggested the idea of growing these trees for profit as material for paper-making. The trees as I find them lining the walks of the grounds seem to stand quite closely, and I have no doubt will make a good showing for shade and ornament by next summer. Being only for temporary use they are proper in their place. Professor L. H. Bailey, in his "Garden Making," speaks of poplars as follows:

"A very rapid-growing tree nearly always produces cheap effects. This is well illustrated in the common planting of willows and poplars about summer places or lake-shores. Their effect is almost wholly one of cheapness and temporariness. There is little that suggests strength or durability in willows and poplars, and for this reason they should always be used as minor or secondary features in ornamental or home grounds. Where quick results are desired nothing is better to plant than these trees; but better trees, like maples, oaks or elms, should be planted with them, and the poplars and willows should be removed as fast as the other species begin to afford protection. When the plantation finally assumes its permanent character a few of the remaining poplars and willows, judiciously left, may afford very excellent effects; but no one who has an artist's feeling would be content to construct the framework of his place of these rapid-growing and soft-wooded trees. I have said that the legitimate use of poplars in ornamental grounds is in the production of minor or secondary effects. As a rule they are less adapted to isolated planting as specimen trees than to use in composition—that is, as parts of general groups of trees—where their characters serve to break the monotony of heavier foliage. The poplars are gay trees, especially those like the aspens, which have a trembling foliage. Their leaves are bright and the tops are thin. A few of them in judicious positions give a place a sprightly air."

Fruit and Vegetable Exhibits Situated as the coming Exposition is, right in the very heart of the greatest fruit interests of the world, we must expect to see under the management of such old-timers in fruit-growing and fruit-exhibiting as S. D. Willard, of Geneva, F. E. Dawley, of Fayetteville (the scholarly director of farmers' institutes), and J. S. Woodward, of Lockport, a show of fruit products such as the world has seldom beheld. It will not be necessary to make such an exhibit imposing by quantity. What is desirable, however, is to have variety, and fine specimens representing each kind, and all correctly and legibly labeled. The exhibit should, first of all, be instructive, and I am glad that so good authorities on fruits as the three men named are put in charge of it; the pictures of all three appeared in our New York state edition of 1896, as also that of Mr. Frank A. Converse, Superintendent of Live

Stock, Dairy and other Agricultural Products. I have not yet been able to learn the intentions of the management in regard to the vegetable exhibit, but will inquire at headquarters.

The Live-stock Show Mr. Converse is very enthusiastic and sanguine about the outlook, and assures me that the show will be something very grand. The live-stock buildings cover two acres, and the stadium where the exhibits will take place and which is similar in form to the old Grecian amphitheater covers ten acres, with a seating capacity of twenty-five thousand people. The circuit of annual exhibits will begin about August 15th, when cattle will be shown for a period of two weeks, to be followed consecutively by horses, sheep, swine, poultry and pet stock. The following breeds of cattle will be represented: Shorthorns, Herefords, Aberdeen-Angus, Galloways, Devons, Jerseys, Guernseys, Holstein-Friesian, Ayrshire, Brown Swiss, Red Polled, Dutch Belted, French Canadian, Polled Durhams, Sussex, Polled Jerseys, Kerrys and Simenthals. Mr. Converse tells me the Herefords Breeders' Association alone has promised to send four hundred head of cattle. T. GREINER.

SALIENT FARM NOTES

Fuel The price of coal is higher than ever, and it will pay every farmer to gather up the corn-cobs, cut up the old rails, chunks and pieces of waste lumber about the yards and use them for fuel. One farmer I know makes it a practice to use every cob and piece of waste wood found on his place for fuel, and he says this practice has been the means of cutting down his coal bills about one half, while his premises have a remarkably neat and clean appearance. The cobs in the feed-lots are raked into heaps twice a week with a hand-rake, and drawn in a small cart to a clean shed near the house; and for conveying them into the house a large basket lined with common sheeting is used. By carefully managing the stove-dampers his wife does almost all of the cooking in a very satisfactory manner with this waste material. Where the large air-tight sheet-iron stoves are used for heating purposes these cobs and other materials can be used to excellent advantage. All that is necessary is to keep the fuel dry and have it convenient to the house. In some of the Western states prairie-grass twisted into tight rolls is used for fuel in these large sheet-iron heaters, and those who use it manage to get along very well. Cobs from the feed-yards, and the chunks of wood usually found lying about most farm-yards, make far better fuel than prairie-grass, and there is no sense in allowing them to go to waste.

Not long ago I was driving past a farm that years ago had been cleared of a fine grove of forest-trees, and I saw the present owner and his son cutting down a high stump with a cross-cut saw. "The fellow that cleared this land left this stump for me," laughed the farmer. "Wasn't he a generous soul? I'll get enough wood out of it to last me a full week just the same," he continued. "I've been on this place two years and have bought only four loads of coal. You see, we employ our spare time in working up these stumps, old rails and knotty chunks lying about into good fuel; and as a penny saved is as good as one earned, we have earned quite a number by saving this stuff." The old man has a nice grove planted on some of the rough, water-seamed land that should never have been cleared in the first place, and he says he expects to live long enough to cut his yearly supply of fuel from it. The former owner of this farm "broke up." The present owner is making money.

Instead of gathering up the waste fuel about their farms, and planting the rough spots with forest-trees that in a few years would yield all the posts and fuel they need, hundreds of farmers prefer to spend their time idly chatting politics and berating "coal barons" and monopolists. A short time ago a farmer said to me, "I had intended to fence that forty acres of grass and make a pasture of it; but the trust ran the price of wire so high that I decided

that they wanted it worse than I did, so I let them keep it. I gave the old pasture a thorough harrowing, and seeded it heavily with a mixture of grass-seeds, oats and rye, then harrowed it again and rolled it, and it made very good pasture all summer. The grass-land that I intended to fence in for pasture was plowed up and put in corn and yielded about sixty bushels to the acre. So you see the wire trust benefited me immensely this season. The way to salivate the trusts is to let them keep their stuff until they get ready to sell it at a fair price." If all the farmers would let the trusts "keep their stuff," instead of idly wasting time berating them, most of them would soon perish. The shortest way to get even with the "coal barons" is to utilize for fuel all the available material we have, and to plant all the rough and waste spots to forest-trees. There is no sense in paying fifty to one hundred dollars a year for coal when we can grow most of our fuel on land that is almost useless for any other purpose.

Timothy Hay One farm product that is bringing a good price this year is timothy hay. Many farmers would be able to sell at least two thirds of all they raised if they had saved their corn-fodder. Horses and cattle will winter as well on good corn-fodder as on hay, and most farmers know it; yet many did not cut a shock of corn. This simply shows lack of common business sagacity. I have noticed that when crops are good and bring good prices many farmers become improvident and allow a great deal of valuable material to go to waste if it happens to be a little difficult to handle. They fail to improve their financial condition when they have the opportunity. Those who never fail to utilize these materials accumulate a surplus, and a period of low prices or an unpropitious season occasions them little or no worry or trouble. It is not alone the faculty of raising good crops that makes successful farmers, but the ability and energy to utilize all to the best advantage. I think the day will soon come when farmers will save their corn-fodder as carefully as they now do their hay. It is more than likely that ere long we will have factories that will call for the thick, heavy portion of the stalk from the ear to the root. Then the upper part—that which is richest in food elements—can easily be cut and stored.

Osage Orange In sections where it will thrive I believe it will pay to plant the Osage orange for posts and telephone-poles. It has one fault, and that is, when it has become seasoned one can scarcely drive any sort of a nail into it. Its lasting qualities when used as posts exceed that of any wood I know of. It grows quite rapidly, and should be pruned about twice a year to make good posts or poles. It will pay those who have Osage hedges to allow one plant about every fifteen or twenty feet to grow up for posts or poles. If they are kept properly trimmed up they will not injure the hedge any and will soon make good posts. When cut they should be sawed off close to the ground during the winter season; then a thicket of shoots will sprout from the stump the following spring, and close the gap. In half a mile of hedge one can grow about all the posts he will need. All that is needed to make straight poles or posts is timely and careful pruning. I have known one Osage post eight inches in diameter to outlast three white-oak posts in succession. Barbed wires or woven-wire fencing can be fastened to these posts by means of short pieces of wire. FRED GRUNDY.

THE PRODUCTION OF WHEAT in the several general divisions of the world is shown in the following total, for years indicated, representing bushels:

	1900.	1899.	1898.
Europe	1,429,520,000	1,508,880,000	1,587,280,000
N. A. . .	592,000,000	658,400,000	794,400,000
S. A. . .	115,200,000	118,400,000	122,400,000
India . .	232,000,000	184,000,000	234,400,000
Asia . .	60,000,000	64,000,000	81,600,000
Africa .	40,000,000	30,400,000	45,840,000
Aust . .	57,600,000	43,280,000	54,224,000

Total 2,526,320,000 2,607,360,000 2,920,144,000

—Cincinnati Price Current.



FARM THEORY AND PRACTICE

DAMAGE BY THE WHITE GRUB.—The larvae, or grubs, of the May-beetle are doing serious damage to crops in some sections of the country. They are one of the foes that make farmers feel helpless. We can fight insects above ground more or less successfully, but when they are in the soil feeding upon the roots of the plants little can be done. In some localities wheat-fields and new meadows are being literally ruined, and these grubs are especially to be feared in potato-fields, because even when relatively few in number they make the tubers unsightly. We are learning not to plant a crop like potatoes in a badly infested field; but where the grubs are numerous enough to kill the wheat and grass the farmer does not know what turn to make. The common impression is that a close crop rotation is the most effective means of controlling this pest, and this is probably true; but in many instances the control amounts to nothing. Much depends upon circumstances. The beetle deposits the eggs in May or June, selecting grass or clover land, or any land that may have upon it at that time any growth of weeds of the grass family in cultivated fields. When as numerous as they have been of late in some sections they may deposit the eggs among other kinds of plants. Of this I am not sure, but I do know that gardens continuously cropped are now infested badly in some cases. But grass is preferred, and while the grubs remain in the ground three years they may belong to only one brood, appearing every third year, and thus giving the farmer a chance to clean the land of them by having the field bare of grass or grassy weeds the June that the beetles appear and deposit the eggs. In such cases the grasslands are not infested by the deposition of eggs two years out of three. But often there is a brood of beetles for each year, and the fight seems hopeless.

CLOSE OBSERVATION PAYS.—Knowing the life-history, the farmer may save himself from some loss by knowing the time when the grubs will cease to work. He can tell how numerous the beetles are in May, and if there is only one brood or two broods in his locality every three years he knows when to expect the most grubs. If they are tiny fellows in the fall or early spring he knows that they will be with him during two more summers, and it is the small ones that are most to be feared. If all the grubs are very large in late summer or early autumn then the ground is safe for potatoes or any other crop the next spring. The grubs will cease to feed that year, going into a dormant form and emerging as beetles the next May. They will then seek the favorable locations for breeding, and ground they have left, if bare of grass of any sort, will probably not be used by them. But when the grubs are of all sizes we know that there is a brood for each year, and profitable cropping of the field becomes a puzzle. It is disheartening to see large wheat and grass fields that are brown and bare as a result of the work of the pest.

FALL PLOWING.—The grub cannot stand rapid changes in temperature during the winter, and hence it goes down below the surface two to ten inches, and even farther sometimes, and makes a little cell that helps to equalize the temperature. Then it becomes dormant. Deep plowing in the winter will reach many of them, exposing them to the frost action, though fall plowing is considered surer, catching them on a cold day before they have gone down, but when they are sluggish and will be caught by the night's freeze. Where the grubs have another year to live before changing to beetle form, and where they are so thick in the fields that the wheat or grass is now dead, as is the case in many places, deep plowing this winter is the last resort. It may kill them. By digging down one can learn their depth and the chance of exposing them to the winter

frost. If the surface is well covered with trash their depth will not be great.

POTATO CULLS FOR HORSES.—Our livery-stables are liberal users of potato culls. Horsemen are learning that nothing is better for grain-fed horses than a small mess of roots or vegetables each day, and in places where potatoes are grown extensively the culls supply this want. Horses soon learn to like them, though it is an acquired taste in nearly every instance. One gallon of potatoes a day given to a horse that gets no other succulent food prevents constipation, relieves the feverish condition of the digestive organs that hay and grain incline to produce, and make the hair sleek. Liverymen have found that they can afford to pay about twenty cents a bushel for potatoes for feed, almost regardless of the price of grain, using them as an aid in the digestion of other food and for health's sake. The actual feeding value, based upon the content of dry matter, is less than the price paid, and one could not make potatoes at twenty cents a bushel a big factor in a food ration for any kind of animal. They have their place, however, in the feeding of all kinds of farm-animals. For hogs and chickens they should be cooked, but for cattle and horses I prefer to have them raw.

PIG PORK.—There are farmers who have never yet learned how superior pig pork is to that of older hogs. The supply of meat for the family is made from hogs twelve or fourteen months old, and this is a big mistake. A pound of such meat costs more than it would from a pig eight months old, and it is distinctly inferior in quality. Experience has shown that the cheapest pork is made from hogs before they reach nine months of age, and the farmer's supply of family meat should be made from a brood of spring pigs on account of the quality. Even the shoulder of a pig of this age is tender and juicy, and is to be preferred to the ham of an old and overgrown animal.

KILLING GRAIN-WEEVIL.—When weevil got into wheat-bins years ago we knew of no way of stopping their work except by moving all the grain and by blowing the weevil out with a fanning-mill. It was laborious, and enough weevil were left to keep the grain infested with them. The use of bisulphide of carbon was a great discovery. Its fumes are heavier than air, and descend through the grain in the bin and bring sure death to all vermin. The amount usually recommended is one pound to each hundred bushels of wheat. Its cost depends upon the quantity in which it is bought, ranging in price from ten to twenty-five cents a pound. In the quantity needed by the farmer the price is usually near the latter figure. The best way to apply it is to use a piece of gas-pipe two feet long, stopping up one end with a cork or any other kind of stopper, thrusting the closed end of the pipe into the grain to the depth of a foot or more, and then pushing the stopper out with an iron rod. Then pour into the pipe a small amount of the liquid, withdraw the pipe, and repeat the operation at another point a few feet away. The grain near the edges of the bin is often most infested. Another way is to make little furrows on the surface of the wheat, pour the liquid in and cover with wheat. Almost any way is good that gets the fumes into the grain. After treatment cover the bins with old comforts, canvas or other material, to prevent any escape of the gas, leaving the granary tightly closed for twenty-four hours and keeping all fire away, as the gas is explosive. Then remove the covering, air the building, and rest assured that all vermin in the bins are dead. Later on more may come, as the first ones came, and another application may become necessary. DAVID.

OUR COUNTRY ROADS

There is one thing about country roads that the supervisors never seem to notice, or if they do, do not consider it of any importance, and that is in allowing piles of stones or logs or boards—anything that is used in repairing bridges, etc.—to lie in heaps at the side of the road for months, or years even. This is criminal carelessness, and should

be dealt with accordingly. How many serious accidents have been caused by horses taking fright at a "pile of rocks," and running away, perhaps killing or crippling some one or breaking buggies or harness, or at the least giving the occupants of the carriage a bad fright? One can scarcely go a mile anywhere along country roads without seeing something that has no right in the public roads.

People often throw papers, empty sacks, advertisements, etc., out to one side as they ride along, which in turn may cause a serious accident. It is no use to scold or whip a horse for shying or otherwise showing fear. How does he know but some dreadful danger lurks in that pile of white rocks half hidden by the weeds, or those logs projecting in a disorderly heap from that dark hollow by the bridge, or that the fluttering paper may be some terrible animal lying in wait for him? With men the first thing when a horse shows fear is the whip; and although it may change his thoughts, or rather divert his thoughts from one kind of fear to another—the fear of punishment, the muscular strength necessary to manage him may be just as necessary in the latter as in the former.

I am speaking in behalf of women in this article. It is so common for women and even children to drive that it is only common prudence to keep the public highway in a condition that will insure their safety. How often we hear, after some fearful accident, that the horse "never was known to be frightened before." So what a horse may go past one time without showing fright is no evidence that he can be depended upon for all future times. It seems very strange to me that these things are not taken into serious consideration.

In driving to a neighboring town a few days ago, my horse, which most people would call gentle, found a great many things of which to be afraid, and this caused me to notice the condition of the roads more than usual. In crossing the river bridge between the two towns a large pile of boards at one side of the bridge near the middle of the river was regarded as something terrible; but coaxing and soothing tones finally lured him back to reason, and he went along, only, however, to begin looking, on his return, for the same fearful object. A ride may be good for the health if one does not have to expend more nervous force than he gains; but when one must be kept in a constant dread of possible—or more like probable—catastrophes from dangers that lurk by the wayside in the shape of slovenly and carelessly kept roadways it is time a little more time and care should be bestowed upon them. People would feel safer and the roads would look much better if the unsightly piles of rubbish used for repairs were kept in some suitable place until needed. A. M. MARRIOTT.

THE FARM FIRESIDE IN WINTER

Sometimes it seems to be a kind of dread to those who live on the farm to think that winter is near at hand. Those who cherish this feeling appear to look forward to the long evenings, and the days when they will not be actively engaged in the stirring work which characterizes the busy months of other seasons, as being void of interest, save as they may seek relief around the stoves of the village store, or, worse yet, the sitting-room of the public inn. The young folks are left to shift for themselves, while the women are supposed to be engrossed in the mending, which falls more heavily upon them in winter than at any other time.

But there is a better way than this to pass the quiet months when the snow blows and the wintry wind howls. I have in mind a family in which that better way is followed, and to show what I believe to be an ideal farm-life in winter I will tell the readers of the FARM AND FIRESIDE how the hours of evening are passed in this household.

On the table there is to be found a good newspaper, daily left at the door by the rural free delivery. The first business is to find out what has taken place in the world during the twenty-four hours just passed. The boys in this family are well informed on all matters of interest in politics and cur-

rent history. The geography is in frequent use, all new places mentioned in the telegraphic news being carefully hunted up. As the reading progresses there is general discussion regarding the various subjects brought up. Even the girls and the mother are interested in this conversation. I would not know where to go to find young persons more thoroughly conversant with the story of the world than our friends on this farm.

Then there are books treating of matters of general interest to farmers. The young man of the family who took a fancy to the photographic art last summer collected the leaves of all the trees growing in the neighborhood, and has made blue-prints of them, labeling each one properly. And I venture to say that not one of the young men in taking the country through could sit down with the portfolio of leaves I have been describing and accurately name all the trees from which those leaves came unless he had access to the labels. It is surprising what a lack of knowledge there is among farmers about the trees and plants which grow right under their notice. We need more definite information about these things. It ought to be a matter for shame to any young man to be couppelled to admit that he was not acquainted with every tree and plant growing in the fields of his father's farm.

And while on this point let me state what is reported to be a fact relative to a mistake made by a member of the science committee of one of the schools for training children in a state which shall be nameless. A company of settlement children from a city were to be given a treat in picking up apples from real apple-trees in the country. But the fruit on the farm visited had been gathered, and not to disappoint the little ones the member of the committee of science engaged a boy to procure a lot of apples, which said science committeeman scattered about under the trees; but much to the enjoyment of the farmer boy who brought the fruit, he saw the committeeman scatter the apples under some pear-trees! Our ideal farmer boys would never have made that mistake.

But this brief outline must suffice to indicate what is being done by the father and mother of this family to give their boys and girls a practical education in matters touching farm-life. Brief as it is, it points the way to a field wide as thought can travel. Just think of all that can be done along these lines to improve the minds of all! I do not think many of us appreciate the value of such a course of reading as would bring us and our children into close touch with the world and what grows upon and in it. The fields, skies, earth and waters teem with objects full of interest to us. Who knows all about the birds? Who can tell us the history of a tithe of the insects which fly in all directions? But why should we not know all about these things? Winter is a good time to make a start. Once our interest is aroused in these subjects nothing more will be heard about the tedium of the farm. What this family has done and is doing thousands of others can do. Why not make a start this winter and then tell us the result? EDGAR L. VINCENT.

A LOUD CALL FOR THE BEST MEN

Never before was the call for trained men so loud as now. They are in demand everywhere. Not only in the professions, but also in business houses, manufacturing establishments, and even on the farm, they are in great demand. The farmer who understands chemistry, who is able to analyze the forces of nature, to mix brains with his soil, will be the great farmer of the future. There is an increased demand everywhere for college-educated men. We find them occupying the best positions in our insurance, banking, manufacturing and transportation institutions. Never before was the call for liberally educated men and women so great as to-day, and the market for brains and education is constantly widening. A manager of a large manufacturing institution says that his firm will not accept any but college men, or at least men trained in polytechnic schools, if it can possibly avoid it.—Success.

NOTES FROM GARDEN AND FIELD

ONIONS IN FLORIDA.—In reference to what I said on the subject of growing onions in the South, in the issue of September 1, 1900, C. W. S., a reader in Tampa, Florida, says: "We plant our onions about November 1st. Sets put out at this date mature about in February, and do well; but we have our best success by sowing black seed of the White or Red Bermuda also about November 1st. These will mature in April, and a fair yield here is five hundred bushels an acre. These onions are fine, measuring four to six inches in diameter, and are of the finest flavor, so they can be eaten like apples. Sets are rather too expensive to make onion-growing from them profitable here."

THE GIBRALTAR ONION AGAIN.—I wonder whether this new sort (Burpee's introduction) has been tried in Florida. If the Bermuda succeeds there under the treatment given by C. W. S. I can see no reason why the Gibraltar should not do well. With me the Bermuda cannot hold the candle to the Gibraltar. Another reader, D. T. G., Willard, Ga., asks for information about this "grand, sweet Gibraltar," where to get seed, and about the new method of cultivation. This shows that the FARM AND FIRESIDE is coming all the time into the hands of new readers, for all the older ones surely should have learned of these things, as I have explained the "new onion culture" and mentioned the Gibraltar time and time again. It also shows that many of the people who are interested in gardening and improved vegetables are not making use of all the sources of information within their easy reach. The catalogues of leading seedsmen always furnish much interesting and instructive reading, and indeed the gardener who claims to be up to date cannot afford to miss the close acquaintance with such publications, especially as they can be had for the asking or at a nominal cost (part of the postage). The Gibraltar onion was introduced a few years ago by W. Atlee Burpee & Co., of Philadelphia, and can only be had from them. So far as I am aware, all the seed of this variety is imported, and sometimes not of strong germinative power. The new method of onion culture has been described at various times in FARM AND FIRESIDE and many other agricultural papers, also in many garden books; as, for instance, in "How to Make the Garden Pay," in "Onions for Profit," in "The New Onion Culture," and in some pamphlets issued by the Department and the stations. It will also be explained in the new and great work, "Cyclopedia of American Horticulture," edited by Professor Bailey, in the third volume, now in press. This new plan consists of growing seedlings under glass (here we sow in January and February and transplant to the open field in March or April). I earnestly recommend it to our Southern friends for trial, and the Gibraltar onion, too.

CHARCOAL ASHES.—A reader in Sharon Heights (state not given) asks me about the value of charcoal ashes as a fertilizer, and how they compare with wood ashes. Charcoal is nothing more nor less than half-burned wood; therefore, charcoal ashes are simply wood ashes, and their value depends on the kind of wood from which the charcoal was made, and the way the ashes were gathered and kept. They will have one to two per cent of phosphoric acid and three to six per cent of potash. Each per cent of these plant-foods represents a value of one dollar to one dollar and twenty-five cents in the ton of ashes. In other words, a ton of ashes having one per cent of phosphoric acid and six per cent of potash has a fertilizing value of seven dollars to nine dollars. For general purposes in gardening or fruit-growing I would supplement this plant-food material with a few hundred pounds of dissolved bone or rock or even fine bone-meal to the ton of ashes.

POTATO-SEED.—W. G. C., a reader in Halifax, N. S., asks me for some information about gathering and cleaning the seeds out of "potato-balls." Should

these balls (the true fruit of the potato) be dried, or should the seeds be taken out at once? When should the balls be taken off the vines? The seed-balls may be gathered as soon as the vines are nearing maturity—in other words, begin to turn to a yellowish color—or at any time thereafter. They will keep well for a long time if desired; but it will be just as convenient in most cases to take out the seeds at once, clean them and put them away in paper packets until wanted. Cut open the balls with a knife, and squeeze out the seeds into a cup or other dish. They are easily cleaned by washing, the seeds falling to the bottom and allowing the water to be poured off with any pulp or skins it may contain. Wrap them into a piece of cheese-cloth (double layer) and squeeze out the water; then spread them out on paper in the sunshine or a warm place to dry. The seed germinates very readily. I have usually started the plants in a hotbed or in the greenhouse in February, March or April, and transplanted them to open ground in May. It is surely an interesting experiment to raise a lot of these potato seedlings, although it is much like buying lottery-tickets. Of the many seedlings I did raise some years ago, and some of which appeared promising at first, none is in existence now. I have discarded one after another as inferior to already existing kinds.

PLANTING CHESTNUTS.—The same correspondent asks about planting chestnuts. Should this be done now, or better in spring? A good answer to this question is given in Professor Bailey's "Nursery Book," as follows: "Difficulty is sometimes experienced in keeping the seeds, as they lose their vitality if dried too hard, and are likely to become moldy if allowed to remain moist. The surest way is to allow the nuts to become well dried off or seasoned in the fall, and then stratify them in a box with three or four times as much sand as chestnuts, and bury the box a foot or two deep in a warm soil until spring. They do not always keep well if stored or stratified in a cellar. Fall planting exposes the nuts to squirrels and mice." I have repeatedly planted chestnuts (some of my large Paragons) in the fall and succeeded in getting the trees to start all right in spring. But there are no squirrels to dig up and eat nuts planted in my garden in the fall, and few mice. One good cat kept in the barn and fed sparingly keeps the premises and fields around the house entirely free from such pests as these.

STORING CELERY FOR WINTER.—At this writing (early in November) all my celery is still in the garden. I am yet using the early self-blanching sorts (White Plume and Golden Self-blanching), which were grown in double rows, but without effort at blanching by boards or earthing. I am using only the inner portions of each plant, and these (especially the Golden Self-blanching) are quite fair, brittle and sweet. Boarding or earthing up earlier in the season would have improved them, no doubt. My later celery—a newly introduced sort grown from seed sown in open ground in April, without transplanting—has made very large growth. The plants have been thinned to stand singly, a few inches apart in the row, and grown very tall and heavy. No special culture or treatment was given to them, and of course they are green all through. I am now taking them up, roots and all, with a chunk of soil adhering to the root, and planting them out on the bottom of a dark frost-proof cellar, with some moist soil under and between them. It is quite an easy way to store it when you have a cellar fit for it and room for the purpose, and it gives most excellent results. With the roots kept moist and the foliage dry, celery will keep in good condition for a long time, and become nice, brittle and well blanched in the course of a very few weeks.

CARMAN NO. 3 POTATO.—A Minnesota reader inquires about the Carman No. 3, and where seed of it can be had for planting. This potato is a fine, smooth sort of more than ordinary hardness and vigor, and a good cropper, and of fair quality, besides, especially if grown on sandy soil. Every seedsman and

grower of seed-potatoes offers it. Look up their catalogues and price lists. Undoubtedly you will find their advertisements in the columns of FARM AND FIRESIDE in due time (during the winter and spring). Watch for them, and ask the nearest ones to you for prices.

T. GREINER.

BY-PRODUCTS

The peelings, cores and other refuse of apples used in making apple butter are shipped from this country to Europe and Great Britain, where they are made into marmalade and wine. Excellent marmalades, beautifully labeled and put up, come back to this country under various names and descriptions, whose origin is the American apple.—Rural New-Yorker.

INQUIRIES ANSWERED

BY T. GREINER

Gibraltar Onion.—W. B. B., Vergennes, Vermont, writes: "I see you speak of Gibraltar onions. Where can I get some of the seed? What color are the onions? Are they flat or globe-shaped? If you have the seed to sell, quote price a pound. Are they good keepers? If you were going to plant black seed, how much would you use to the acre?"

REPLY:—The onion is of a light straw-color, and has been more fully described in my notes in this and earlier issues of the FARM AND FIRESIDE. I am not selling seeds of any kind, nor plants. I would not plant more largely of this onion than could be sold during summer and early fall. If grown directly from seed in open ground sow at the rate of about four pounds of seed to the acre, making the rows fourteen inches apart.

ORCHARD AND SMALL FRUITS

CONDUCTED BY SAMUEL B. GREEN

San Jose Scale.—K. J., Bridgeport, Conn. The twig of plum-tree received from you is badly infested with San Jose scale, which is a very minute insect that is one of the worst foes of orchards. For best treatment see reply to similar inquiry in one of the late numbers of the FARM AND FIRESIDE.

Pruning Old Grape-vines.—W. H. G., Manchester, Vermont, writes: "I wish some information in regard to pruning some old grape-vines. I have some old grape-vines which must be taken from an old arbor and placed on a trellis. They have never been pruned, and the main vine is three inches, and two inches at a length of fifteen or eighteen feet. Will it do to cut them off, say three feet from the ground, or would it be better to leave them long and lay them down? I can prune young vines, but this one 'sticks me.'"

REPLY:—I think you will get the most satisfaction out of your vine if you cut it off close to the surface of the ground. If this is done before growth starts in the spring a lot of suckers will come from the old stump, and one or two of them can be saved for the new vine. It may be that a severe pruning of the main cane and laterals is all that is necessary to accomplish the desired results.

Pecan Culture.—A. W. H., Blandinsville, Ill. The pecan is at home in the Southern states, Texas and California. It is found as far north as central Illinois, but Texas produces the most of the nuts of commerce. The wood is not durable enough for posts, although it is excellent fuel and is used for agricultural implements, etc. The nuts are generally planted in the autumn, and the seedlings transplanted when one year old either to rows in the nursery or to the field where they are to grow. The very best nuts are obtained from grafted trees, but these are difficult to obtain and uncertain in growth. Most commercial orchards are grown from selected seed, those with large thin shell being preferred. The seedlings are planted out when two or three years old, about forty feet apart each way. The best soil is a somewhat moist but well-drained, deep, sandy loam. The trees generally commence to bear when from eight to ten years old. They grow quite rapidly when given good cultivation. They should be cultivated until they commence to bear, when then the land may be seeded down and pastured.

Strawberry - plants — "Strawberry - Raspberry."—N. B., Willmar, Minn. Strawberry-plants from southern Indiana ought to do well with you, providing they are of the hardy sorts and adapted to your location. As a rule I do not like to set strawberry-plants so late as the middle of October, but as the land is moist with you I think they ought to do well, and you will thus save work for next spring. However, when planted so late some extra protection is needed, and I think I would cover them with about three inches of soil and a little mulch on the approach of severe freezing weather.—Your reference to the so-called "strawberry-raspberry" having roots of the raspberry and tops of the strawberry leads me to think you are misinformed in

regard to it. The plant that has been sent out under this catch-penny of a name is really not a strawberry at all, but a sort of raspberry from Asia (*Rubus sorbifolius*), which fruits on the new canes of the season when they are two feet high. The fruit is as large as a large strawberry, and scarlet in color, but hollow and tasteless and worthless for anything but ornamental purposes.

Leaf-crumpler.—E. L. W., Rives, Tenn. The specimen received is that of a "leaf-crumpler," and its work is cutting and fastening together the broken portions of leaves mixed with the excrements. The caterpillar that does this work in its mature stage is a brownish moth. If the bunch of broken leaves is examined at this season it will be found to contain a small caterpillar, which was born late in the summer and is now about one third grown. It will probably winter over where it is, and as soon as the leaves appear in the spring will commence feeding on them and continue so doing until it commences to undergo its changes in the latter part of spring or early in summer, when it will change to a reddish-brown pupa and emerge a moth. The best remedy is to gather and burn the bunches of broken leaves, with the worms in them, that are now hanging in the trees, which treatment is enough for ordinary cases. If, however, they are too numerous to make this method practical, you had better spray the foliage of the trees as soon as it shows in the spring with Paris green and water, at the rate of one hundred and fifty gallons of water to one pound of the poison.

Gum on Peach and Plum Trees—Grape-berry Moth.—T. R., Patchogue, New York. The reason why your young plum and peach trees have bunches of gum on them is probably due to the fact that they are infested by borers, or injured in some other way. There is a gumming disease which occasionally affects these trees which is constitutional, and not due to any exterior injury; but this is rare compared with the exudation of gum due to the presence of borers. This can generally be prevented by digging away the gum and removing the borers, after which the wood should be well covered with a good coat of white-lead paint, and if near the ground, in addition be covered with earth, which prevents drying out.—The injury to your grapes is done by the larva of the grape-berry moth. This European insect is pretty well distributed all over the grape-growing sections of America. It produces two broods at the North and three at the South. The young caterpillars injure the berries in July, when the infested fruit shows a discolored spot where they have entered. After finishing the contents of one berry they often attack others and tie two together with silk. When full grown it forms a little house for itself out of a piece of grape-leaf and emerges as a slate-colored moth. It winters over in the fallen grape-leaves, and the first brood that appears in spring eats the foliage, tendrils and flowers of the vine, as the berries have not yet appeared; but on the whole it does little damage at this time. Remedies—The use of poisons are not practical. In a small way the covering of the bunches of grapes with bags as soon as the fruit is set is best. In the case of commercial vineyards the fallen leaves should be promptly collected and burned soon after they fall, thus destroying the larvae and pupae. The infested grapes should also be gathered and burned, so far as it is practicable.

Trees Near Spring.—G. V. H., Athens-on-Hudson, N. Y., writes: "I have a spring on my place at the foot of a hill, surrounded by several apple-trees, the nearest one being six feet on the side of the spring that the vein is. The spring has gone dry for a number of years, which it did not always do. Do the trees take all the water from the ground, and so make the spring go dry? Shall I have the nearest trees cut down?"

REPLY:—I doubt if there is any connection between the growth of trees near your spring and the fact that it has gone dry. It is very true that trees throw off a large amount of water from their foliage each day, and a very large apple-tree might perhaps throw off as much as two thirds of a barrel of water throughout the hottest days of summer. This is one way in which trees lessen the amount of water available for the source of springs. On the other hand, the shade which the trees furnish to the surface of the land prevents evaporation, and it is well known that an acre of land covered with trees will not evaporate as much as the same amount of land covered with corn, grass or almost any other agricultural crop. It is more than likely that the spring has failed owing to the cutting down of some grove of trees near the source of the spring, perhaps on some high land above it, than from any soil conditions near by. I have repeatedly known what were regarded as perennial springs to go dry when the timber surrounding them or upon the high land above them had been cut off. This is due to the fact that the forest leaves a leaf-mold on the ground, which retards the run of the water, so that it soaks into the land, and the snow does not melt as rapidly in the woods as in the fields, and consequently has a good chance to soak into the land. I have known, too, of springs that have failed because of the forests nearly being cut off to burst out and become again perennial when the forest growth was allowed to grow, and this is no unusual experience.



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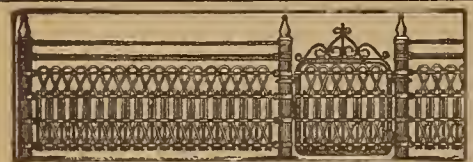
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A GLIMPSE OF THE PARIS EXPOSITION

[CONTINUED FROM PAGE 1]

own peculiar tool, and they all looked with awe at the great steam-engines which have crowded in among their own wooden instruments. One primitive-looking affair was the first threshing-machine ever used in France, invented by one Deplauzu, and used by him in the year 1783. Of course, there were reaping-machines, from the sickle to the famous American binders, and here we did ourselves proud, for we had a magnificent display, and our agents were besieged by wondering farmers and land-owners.

The most curious fact I noticed was that women were the most interested spectators around the agricultural machines; for in France, as in many other countries in Europe, "the man does the bossing and the woman does the rest!"

In the Dairy Department there was much to see of shining brass cans, in which the French farmer carries the milk to market. There were churns, ancient and modern, and the visitors to this display were anxiously comparing the points of different machines, and some of our American appliances were very much admired. This whole department seemed like a huge county fair, for sturdy farmers from the world over were in attendance, and carried with them, no doubt, great inspirations to their humble and honest homes. I suppose farmers the world over on fair-days are fond of sweet things, and there were sticks of frozen ice-cream and glasses of colored lemonade in the hands of nearly every visitor, and of the many people who crowded into this huge fair the farmer seemed to have the best time of it. There were endless rows of incubators, and fluffy little balls just out of their white shell were chirping away in their feeble manner, scarcely realizing how orphaned they were and how much of a curiosity to the many farmers who never had seen a "wooden hen."

The Horticultural Building also harbored one of the most interesting displays, especially interesting to me, for here the fruits of the world were heaped temptingly. The mammoth fruits of California outshone everything else. Here stacks of white giant pears with transparent skin made all other fruit of the same kind from other countries look coarse and dwarfed. Peaches, oranges, and olives, even, surpassed much of the same fruits displayed by other countries. With the exception of the cherries displayed by France, which were surpassingly large, luscious and beautiful, America bore off all the honors in this department. To compare the fruit display of America with that of Europe means simply to compare the American farmer with the European farmer. Our fruit looked intelligent, if such a figure might be used; well fed, well developed and graceful, it was, to borrow a sentence from Mark Twain, "fruit with a college education," and from many a French farmer's lips came the question, "Why can't we do these things?" And as I remember the small, gnarly fruit displayed in many of the markets of Europe, and when I see the slopes and fields of many a country so well fitted for growing fruit, I ask myself the same question.

There was also friendly rivalry in the display of flowers, in which department we were but sparingly represented, and could have scarcely rivaled the display of other countries.

In the Department of Applied Arts, Russia, so seemingly backward, made a magnificent display, compared with which our own was of utter insignificance, and made me wonder whether we shall ever produce anything that is really beautiful. Germany and Italy vied with each other to outdo France, and it would have set the head of many a good housewife whirling if she could have seen the dishes of all sorts and kinds which were exhibited here.

Among the furniture-work I surely thought America would take an honorable place; but we were simply "not in it," to use an expression of the street, which certainly must be some one's fault, for we do create beautiful things in furniture. Everywhere we showed clearly that we were a practical people,

that all our appliances were useful, that they saved time and human strength, but that where beauty was a condition we simply failed.

Of course, we wandered among street-cars and railway-carriages which were exhibited by many nationalities, and found our own limited express the finest thing on wheels; yet the European countries are fast following us, and the express-train which carries passengers once a week from Moscow to Siberia comes very close to our own efforts in that department.

In one field we won great distinction, for we were seemingly the only people who gave away souvenirs, and it was a dangerous crush where a jovial Yankee, representing the Deering Self-binder Co., gave away buttons, which shone upon every coat which passed through the Agricultural Hall. There were also booklets and picture-cards innumerable which our representatives scattered through the crowd, and our reputation for extravagance and liberality has been increased by these efforts even if there has been no real advertising done; for in many cases these souvenirs were printed in English, which two thirds of the recipients couldn't read.

Of course, there followed a ride upon the moving sidewalk, which is a tedious sort of way to go about. There were visits innumerable to palaces of the nations, where one could have a deep look into the life of strange people; then there was the ride upon the Seine River, from which one could behold to good advantage the avenue of palaces which lined it.

I have been asked over and over again how this Exposition compared with our own in Chicago, and I have heard the answer from almost all American visitors that the Paris Exposition could not compare with our own. Of course, this must be true so far as architectural display is concerned. In Chicago there was room, there was a beautiful background of matchless lake, and everything which lifted itself above the ground could show to good advantage; but here in Paris everything had to be crowded in between other buildings, scattered in different streets and avenues, and a harmonious picture could not be created. There was also in Chicago a much better organization—much better order—and one could more easily find such objects as he desired to see. In Paris there was little or no division between Midway Plaisance and the real exhibit, and it seemed to the casual observer that the exhibits were scattered too much, and that one had to wander aimlessly through the crowds and stumble upon the things one cared to see; but judging the exhibition from the standpoint of display, the wealth of material heaped up, and its beautiful arrangement, I can unhesitatingly say that this exhibition surpassed anything which has formerly been attempted. After all, Paris itself was a world's fair, in which everything which was beautiful and gay was displayed temptingly, and all that which was ugly, dignified and impoverished was hidden from the visitors' gaze. Everywhere there was the desire to please and to make money out of you, whether you were pleased or not, and to impress upon you that this life was made to "eat, drink and be merry." It is more than likely that when the exhibitors shall have "folded their tents, like the Arabs, and silently stolen away," the real Paris will show itself to the world—the impoverished, hungry, discordant, fighting, blood-thirsty Paris—and that the gaiety of many moons shall be changed into the battles of years. There is in Paris now dissatisfaction with itself and with its rulers, enmity among classes and enmity among nations, and it may be that to avert internal troubles France will permit herself to set sail across the Channel and attack her natural enemy, England. With Germany she is now reconciled, for Kaiser Wilhelm has flattered and wooed her and almost won Labelle France's heart.

There were throngs of Germans in Paris, and the Boulevards were invaded by friendly faces. Dutchmen were shooting at the French, not with bullets, as thirty years ago, but with good-natured banter and with golden duets; but the English stayed away, and that the French will never forget.

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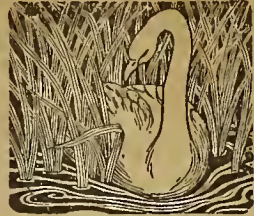
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THE POULTRY-YARD

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BETTER STOCK ON FARMS

BREEDERS and farmers are discussing the question of healthy strains of fowls and the necessary care and attention, so as to secure the proper propagation and improvement thereof, and the subject is fast becoming a matter of more and more general interest. Among such interested and wide-awake parties are to be found annual purchasers of new blood—those who make as careful selection of fowls as they do in their procuring of known and blooded stock for the improvement of the horse, cow or hog. But here is where the mistakes of so many well-managed enterprises occur, and that is the trying to keep too many varieties, an evil that is second only to that of continuous inbreeding. Would the farmer, who massed his sheep or hogs (all kinds) together in one field year after year expect perfection or the continuation of a distinct variety? As well might he expect different results in thus handling poultry. When the proper separation of different species cannot be secured and assured the procuring of different and numerous varieties cannot be too carefully guarded against. The habit is at first reprehensible, as would be a similar course with any other class of stock. Improvement is rarely found in a cross, and that only with an after-care in guarding and perpetuating such cross until it becomes a distinct breed of itself. This care and attention cannot, and will not, be given by the average keeper of poultry; hence, if a distinct variety is desirable—one in which distinct and pure blood can be added annually—let our farmers and breeders see to it that they handle but one variety. In no other way can the defects (if any) or merits of the birds handled be wiped out or improved upon. If, however, parties insist that they must keep, and will keep, more than one variety, then let them prepare for each separate yards, and runs in which to pen them up during the breeding season at least. A pen and yard being necessary when a party desires improvement, let them be handling one or more varieties. If this plan is followed out, the breeder selecting from his best each year, setting from their eggs only, improvement may then be expected and secured.

WARMING A POULTRY-HOUSE

A poultry-house should not be made very warm or the fowls will not so easily endure the cold outside. About fifty degrees above zero is warm enough. In fact, if the thermometer never goes down to the freezing-point it will be sufficient. An excellent plan is to light a kerosene-lamp or oil-stove, set a joint of stovepipe over it, and lay a tin plate, or something similar, over the upper end of the pipe, but not close enough to have the plate interfere with the draft of the lamp. The pipe will be hot as long as the oil lasts, and will radiate the heat in all directions, while an open lamp simply sends the heat upward, leaving the floor cold. One lamp for every twenty feet of house will be ample. A drum could be made if preferred. The lamp should be protected, in order to prevent the fowls from throwing it over. On damp days it will be very serviceable, as it dries the house. There will be no danger from odor or foul gases if the house is well ventilated during the day. Night is the time the warmth is most needed. A poultry-house may be plastered, sealed or lined with paper or oiled muslin. All that is necessary is to tack on the paper and fasten tightly in place with lath. By so doing all the cracks will be closed and the house rendered warm and comfortable. It is not the large openings that cause colds and roup, but the little unobserved crevices through which a small stream of cold air comes and gives a swelled head or closed eyes to the bird that may be roosting near. If the comb is large, a hole no larger than a pin-head may

let in a constant stream of air, which, coming directly against the comb, may cause it to be frosted, in which case the pain is so severe that the bird will be useless until a portion sloughs off and the comb heals up again.

WINTER DISEASES

While roup may not exist in the flock, yet hoarseness, rattling in the throat, blindness, etc., are common ailments. They are mostly due to colds, and are usually caused by exposure to drafts of air at night, either from a crack or crevice in the wall, from top ventilation, or from exposure during the day to high winds. It is very annoying, and affects the fowls that are very fat more than others. As the nostrils are usually closed, also, the giving of liquid medicines sometimes results in strangulation. Keep the birds dry and warm, away from drafts of any kind. Inject one or two drops of camphorated oil into each nostril, let the bird be quiet (as exercise seems to increase the difficulty), and give a pill the size of a three-cent silver piece in diameter three times a day, composed of equal parts by weight of quinine, bromide of potash and red pepper. After so doing swab the throat with a solution made by dissolving a piece of blue vitriol as large as a bean in a gill of warm water, using a soft rag on a stick. Feed on nourishing food, such as chopped lean meat. The main point is to keep the bird dry and warm. If the breathing is very severe give two drops of spirits of turpentine on a bread-crum once a day. A teaspoonful of beaten raw egg is also excellent.

FEEDING MIXTURE

Always make it a point to feed laying hens only as much as they will eat up clean. To mix the morning feed, take some suitable measure and use about four parts bran, one part oats, one part middlings, one part corn-meal and one part ground meat; reduce the meat and increase the ground food more or less, as the condition of the fowl seems to require, as corn is very fattening and must be fed cautiously even in winter. If at any time it does not seem to agree with the fowls increase the middlings to about four parts, and at the same time reduce the bran to one part, oats one part and corn one part. Then vary the feed as observation indicates. About the most convenient way to prepare this feed is to put it in a mixing-box dry and thoroughly mix it, adding a teaspoonful of salt and a little red pepper occasionally. If convenient add to the mixture from three to four pounds of fresh ground bone (butcher scraps) or else the same weight of cut clover. One or the other of these meats must be fed regularly once a day, giving also a handful of oyster-shell grit. Alternate by feeding whole grains one day and the mixture the next. The food may be given dry, if preferred, without making it soft or watery.

IMPROVED ROOSTS

One of the best modes for roosts or perches in the poultry-house for large fowls is to use for this purpose common two-inch square spruce rails rounded on the top side and spiked to a frame of similar strips on the ends and middle, in shape like a gridiron. This frame of roosts has three legs, say two feet high in front, and the back is fastened to the wall at the same height with strong strap-hinges. The roosts are laid about twenty inches apart on the level. In this form the whole can be raised and hooked up to the house ceiling in the daytime, out of the way. At evening it is let down and stands upon the floor. The fowls are thus disposed of at night without sitting over each other, and prevented from soiling those that may (by the slanting style of the roosts) be at rest beneath the others. For the

larger varieties this is an excellent plan, since they ascend and descend easily and are not endangered in coming down, as they often are from roosts ranged too high up in houses; while at the same time, in contracted buildings, the roosts may thus be always kept cleaned readily, and by being raised will afford more open space inside the buildings during the daytime.

TURKEY-FEATHERS

The tail and wing feathers of turkeys are used for making dusters. The tail-feathers are the most valuable, owing to their having a heavy fringe on each side. The first and second joints of the wings from the body are next in value. The feathers of the extreme end of the wing are called pointers, but possess no remunerative market value, owing to their having an indifferent fringe on only one side of the quill; but the manufacturers of the dusters sell them for about four cents a pound, or according to the ruling price, to the makers of cheap bedding, who strip this edge off and use them for that purpose. All feathers used for making dusters should be passed through a machine, that cuts away all the inner portion of the quill, leaving only the glazed outside portion which holds the fringe. The refuse portion of the feathers makes a good fertilizer. Each kind should be shipped separately, so as to sell them at their full value; but it is not necessary to tie them in bundles unless sent in the box with the poultry. In order to estimate the value of a mixed lot one should weigh those coming from one bird, when they will notice that the wing-feathers are heavier than those from the tail.

THE INCUBATOR

All eggs used for incubation should be fresh—not more than ten days old. Select all the eggs of uniform size and place them in the egg-drawer; light the lamps and run the thermometer up to one hundred and three degrees, and keep it there for twenty-one days. Look at the thermometer three times a day—seven o'clock A. M., midday and six o'clock P. M.—at each time turning the eggs, and cooling them fifteen minutes each day early in the morning. The last time examine before retiring at night, and if at that time it is turning colder outside turn up the flame a little; if it is becoming warmer turn it down. Everything depends on the individual. Almost any incubator will give good results if properly managed.

THE RANGE AND THE YARD

On the range the hens get a little at a time, but they are ever moving from place to place and are busy as possible. It is a different matter when they are fed by the owner. He throws down the food and they fill their crops at once. Having done so they are satisfied and "wax and grow fat." There is a lesson to learn from the natural mode of feeding by the hens. Give them this food in small quantities. When the crop is overloaded too much food is passed into the gizzard to be triturated, and the digestive organs are overtaxed; but when the food is eaten gradually and slowly digestion is natural and the system is better nourished.

INQUIRIES ANSWERED

Meat for Poultry.—C. M. D., Foster, Oregon, writes: "I find meat and bone excellent for my fowls. How should it be fed to best advantage? How much sulphur should I use to 'sulphurize' one hundred pounds of meat?"

REPLY:—For each hen about an ounce of meat each day, with other food, should be sufficient. A pound of sulphur will probably answer for "preserving" one hundred pounds of meat by exposure to sulphur fumes.

Feather-pulling—Swollen Eyes.—M. A. G., Centralia, Ill., writes: "Some of my fowls have swelling of the eyes, one having lost an eye. They also pick the feathers from each other."

REPLY:—It is difficult to state the cause without a knowledge of the details of management. It is probably a form of roup, and as the fowls are pulling feathers (an incurable vice) it will be an advantage to destroy the entire lot, as the disease of the eyes will probably spread among all the members of the flock.

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VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to Dr. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

SPAVIN, RING-BONE AND NAVICULAR DISEASE

These three diseases, although affecting different joints, belong together, because the morbid processes in all three are identical, and the causes producing them, to a certain extent, at least, are the same. The real difference is only in the seat, which in spavin is usually in the small bones and their cartilaginous articular facets constituting the lower median part of the hock-joint, but may in severe or extraordinary cases extend to nearly every bone and its articular facets belonging to that very complicated joint. In ring-bone the morbid process in most cases is limited to the joint formed by the lower end of the first phalanx (pastern-joint) and the upper end of the second phalanx (coronet-bone), but may extend to the joint below, between the second and third phalanges, and even in comparatively rare cases to the joint above—the pastern-joint—while navicular disease as a rule has its primary seat in the cartilage-coated articular surface of the navicular bone of the hoof, and affects the joint formed between this bone and the third and second phalanges. In all three diseases the morbid process as a rule will sooner or later spread to the periosteal surface of the bones. In some cases it even happens that this surface is attacked first—and in advanced cases it often spreads still further, to the ligaments connecting the bones contributing to the formation of the joint. In all three diseases lameness will be present as soon as the morbid process makes its appearance in the cartilage-coated articular facets, and will be absent as long as these facets are not affected. Hence, lameness is present from the first beginning in all cases in which the morbid process has its beginning in these facets, and, so far as spavin and ring-bone are concerned, before any abnormal elevation or enlargement can be observed anywhere on the surface of the diseased joint; while, on the other hand, such an elevation or enlargement will be observed before the horse shows any lameness if the morbid process first affects the external, or periosteal, surface of the bones, and then the lameness will not make its appearance until the articular facets also become diseased. Therefore, lameness, for some time, at least, may exist before any visible indication of spavin or ring-bone is present (so-called invisible spavin and ring-bone) and external signs—an enlargement—may exist and no lameness be noticed. But although either condition may exist for some time, and in rare cases permanently, as a rule a visible enlargement will soon make its appearance where lameness is existing, and the latter will soon be in evidence wherever an enlargement is the first visible product of the morbid process, because the latter is very apt to spread in a short time from one part of the affected bone or bones to another, no matter where it may have first started. Especially if it originates in an articular facet, so that the first symptom of the disease is lameness, it will, except in exceedingly rare cases, soon spread to the periosteal, or external, surface of the affected bone or bones, and thus also produce an enlargement, and then the invisible spavin or ring-bone becomes visible. Cases in which the morbid process begins in the periosteal surface of a bone, and comes to a stop before it reaches the cartilage-coated articular facets, in which, consequently, an enlargement is visible, but no lameness can be observed, are apparently more frequent. I say "apparently," because it is not always possible, or at least not easy, to distinguish an enlargement produced by the specific morbid process of spavin and ring-bone and an enlargement caused by an accidental injury or even a natural inequality between the outlines of the corresponding joints.

Concerning the Causes of Spavin, Ring-bone and Navicular Disease, it is not difficult to distinguish predisposing causes and an exciting cause probably of a specific nature. Of these the former are well known, while the latter is not, although its existence and its activity are plainly indicated by the peculiarities of the specific morbid process, which is in all three diseases and in all cases essentially the same, and which, unless interfered with, never exhibits any symptoms of inflammation. The predisposing causes consist of an abnormal weakness, or an unequal or disproportionate distribution of weight and concussion upon the single parts of the joints in question—the hock-joint in spavin, the coronet and other phalangeal joints in ring-bone, and the navicular joint in navicular disease—caused either by an inborn (transmitted or hereditary) defective formation, by acquired defects, or by an artificial overburdening of one of the joints in question, or a more or less lasting disturbance of a proportionate distribution of weight and concussion upon its single parts. From time immemorial spavin, ring-bone and navicular disease have been considered as hereditary diseases, and such they are in all those cases in which the imperfect formations or defective mechanical proportions of the joints in question, acting as predisposing causes, are hereditary, or transmitted by sire or dam upon their offspring; and this, and this only, is the cause of the frequent occurrence of these diseases in certain families of horses and their entire absence in others. Therefore, not only all horses and mares afflicted with spavin, ring-bone or navicular disease should be excluded from breeding, but also all those showing a defective or an insufficient development of the joints in question, although they may yet be free from any of these three diseases. If this were done by American breeders, like it is done, to a certain extent, at least, in several European countries, spavin, ring-bone and navicular disease would soon become very rare.

1. Concerning the Hock-joint.—Spavin usually starts, and most frequently occurs, in the lower rows of small bones on the median side of the hock-joint, and these bones are overburdened—have to sustain much more than their normal share of weight and concussion—if the horse is bow-legged; or, in other words, if, when the horse is standing squarely on his four feet, the horizontal distance between the two hock-joints is considerably greater than the horizontal distance between the pastern-joints or between the

hoofs, for then the horseshoer has it in his power, especially if the horse is yet a young animal, to gradually correct this faulty stand, and to relieve, at least to a certain extent, the overburdened median part of the hock-joint by slightly raising the outer part of the hoof either by using a shoe with the outer arm a little thicker, or by paring away a little more horn from the lower border of the median part of the wall.

2. Concerning Ring-bone, which usually starts, and most frequently occurs, in the coronet-joint, it is seldom, or perhaps never, observed if the phalanges (the part of the foot between the pastern-joint and the hoof) are sufficiently long and sufficiently slanting, for then the coronet-joint, unless the bones should be abnormally weak, is not overburdened, because an adequate part of weight and concussion is sustained by the flexor tendons. Consequently, if, as is often the case in cold-blooded or heavy draft-horses, the phalanges are short and too perpendicular, so that nearly the whole weight and concussion has to be sustained by the bones, and but comparatively little by the tendons, the horseshoer will make the condition worse if he shoes such a horse, as is often done, with shoes having high heel-calks, and he can somewhat improve it, if calks are required for other reasons, by using shoes provided with broad toe-calks and comparatively low heel-calks, for then more weight will be thrown upon the tendons, and the bones will be just that much relieved.

3. Concerning Navicular Disease, which starts, and occurs, in the navicular bone, a few facts deserve special attention. The navicular bone, situated above the frog, within the posterior part of the hoof, is connected with the posterior end of the hoof-bone, or third phalanx, and with a cartilage-coated surface of its own serves to enlarge posteriorly the articular surface of the hoof-bone, and thus articulates with the lower articular surface of the second phalanx, or coronet-bone. In this position it serves as a kind of pulley, and also as a lever for the large flexor tendon, which, considerably flattened, passes over its posterior and lower surfaces in an obtuse angle before its insertion to the lower surface of the hoof-bone. Hence, all the weight and concussion thrown upon this flexor tendon must be sustained by this small navicular bone. It is true the latter is protected and the concussion is very much broken by elastic tissues, the plantar cushion and the frog, so long as the mechanism of the foot is intact and these elastic tissues fully able to perform their functions. But it will be different if the workings of this mechanism are interfered with by anything capable of causing a contraction of the hoof, or interfering with the exercise of the functions of the elastic tissues; for instance, by defective shoeing, by driving in nails too far back, by allowing the shoes to stay on for too long a time, by cutting away the bars, by lowering too much the posterior part of the hoof by irrational paring, etc. Navicular disease is said to be much more frequent in hot-blooded horses than in cold-blooded ones, and this, for several reasons, is probably true. In the first place, hot-blooded horses as a general rule have longer and more slanting pasterns (phalanges), whereby more weight and concussion is thrown upon the flexor tendons, and, consequently, also upon the navicular bones. Secondly, hot-blooded horses are apt to move at greater speed and to make further-reaching steps, which necessarily increase the concussion. Thirdly, a very erroneous idea seems to prevail, especially in cities where the hard pavement very much increases the concussion—whether it is among the owners of horses or among the horseshoers, I will not decide—that a horse, but particularly a hot-blooded horse, must have the bars and the whole heel-parts of the hoof cut down to the utmost, and must have the toes left as long as possible. If there is anything that will act as a predisposing cause of navicular disease it is this most pernicious practice, because it not only increases the weight and concussion thrown upon the navicular bone, and deprives the same of its most efficient protection, but it also thoroughly destroys the mechanism of the foot. A hoof thus treated will soon grow longer and narrower and become contracted in the heels. Another means of increasing the predisposing cause consists in using shoes too wide in the heels, and in allowing them to remain on an unreasonable length of time, which is the more detrimental the wider the heel-part of the shoes.

Diagnosis of Spavin.—If the horse is lame, and also presents a hard and perhaps uneven enlargement on the lower part of the median surface of the hock-joint, the diagnosis is quite easy, and almost any farmer can make it, especially if the characteristics of spavin lameness are plainly developed. As characteristic may be considered the following peculiarities: A spavined horse as a rule is the lamest when first taken out of the stable, and then especially the first steps made by the lame foot are made with a somewhat jerky motion. If then the horse is exercised the lameness gradually decreases, and in some cases altogether disappears, or is reduced to a minimum after the horse has traveled a mile or two, while in other cases more or less lameness remains, no matter how long the exercise may last. The lameness is always the most severe if after a somewhat protracted exercise the horse is given an hour's rest and then started at a trot. In all cases in which the lameness is of more than two months' standing more or less shrinking in the muscles of the pelvis of the lame side can be observed if the horse is caused to stand squarely upon his feet and the observer places himself a few steps behind the horse. Such a shrinking, however, can hardly be considered as characteristic of spavin, because it is a concomitant of nearly every chronic lameness. The diagnosis is not so easy where no enlargement whatever can be seen, notwithstanding that the characteristics of the lameness are the same. But a little experiment will soon tell the tale. In such a case the suspected horse is bridled, placed on a level piece of ground, and a man holding the bridle-reins, but not closer to the head of the horse than necessary, is instructed to go off with the horse on a trot as soon as the word "go" is given. Another man takes hold of the lame foot, raises it forward and upward as high as he can, so as to flex every joint. The observer places himself a few steps behind the horse and a little toward the lame side, and after the foot has been raised for a few minutes, or when the horse begins to get uneasy, the observer gives the word "go," and at the same time touches the horse with a whip. The very moment the word is given the one man lets go the foot and the other goes off with the horse. If the lameness of the horse is caused by spavin, and both the man who holds the foot and the man at the head act promptly at the word "go," the horse will make the first three steps on three legs, which will not be the case if the lameness has another source.

Diagnosis of Ring-bone.—In cases of lameness caused by ring-bone an enlargement is seldom absent, and the diagnosis, therefore, is easier. The lameness, like in spavin, is usually also worse when the horse comes out of the stable or has had some rest, and then gradually decreases if the exercise is continued, but rarely disappears entirely. If the ring-bone is on a hind foot, and of more than two months' standing, the shrinking of the muscles is the same as in spavin; and if it is on a fore foot a similar shrinking will be observed in the muscles of the shoulder. Symptoms of inflammation are absent.

Diagnosis of Navicular Disease.—In navicular disease, in which the diseased parts are hidden within the hoof, the diagnosis is seldom very easy. It has to be based partly upon negative and partly upon positive symptoms. The former consist in an entire absence of any inflammatory symptoms, such as swelling, increased warmth and an abnormally plain pulsation in the digital arteries. As positive symptoms may be mentioned a tendency of the horse when at rest in the stable to bring only the toe of the lame foot in contact with the floor, and to stand with the knee of the lame leg more or less flexed. This position, of course, will be changed when the other—healthy—leg becomes too tired, for then the weight will be shifted until the tired leg has rested. When the lame horse is compelled to move, it will touch the ground rather gingerly with the heel-part of the hoof, and throw as soon as possible the weight again upon the other foot. After some time, say in about two months, the hoof of the lame foot will begin to grow smaller than the healthy one, as can be proved by accurate measurements with a tape-measure, and the contraction of the heel-part of the hoof will gradually increase and the frog will become more and more shrunken. At the same time the muscles of the shoulder will also show more or less shrinking. But all this is not always sufficient to secure the diagnosis; at any rate, many a case of even severe navicular lameness is mistaken and treated for shoulder lameness, probably on account of the more or less conspicuous shrinking of the muscles of the shoulder. In such a case I advise to shoe the lame foot with a bar-shoe, and thus to cause considerable pressure upon the frog. If this is done, and navicular disease is existing, the lameness will at once conspicuously increase, while it will have no effect upon the lameness if its seat is somewhere else. Of course, as soon as the diagnosis is thus secured the bar-shoe must at once be removed, and it should only be employed if a diagnosis cannot be secured in any other way.

Prognosis.—Concerning a restoration of the diseased tissues, bones, cartilaginous coating of the articular facets and ligaments, the prognosis is in all three diseases equally bad, because such a restoration to the former normal or healthy condition is an impossibility; but concerning the lameness and a restoration of the lame animal to usefulness, the prognosis in a great many cases, especially of spavin, is rather favorable. So, for instance, the prospect of removing the lameness in cases of spavin is good if the morbid process is limited to the small bones which make up the semi-movable joints constituting the lower part of the hock, so that the upper joint, or hinge-joint, in which all the flexing and stretching is taking place, is not in the least affected, and if at the same time the predisposing causes are present only in a limited degree. That this latter is the case may be concluded if the hock-joint itself is tolerably strong, and if its formation is but slightly defective—a really strong hock-joint of faultless formation, in which every part is equally strong, and the whole make-up such as to cause weight and concussion to be distributed in due proportion upon all its parts, will never contract spavin—and if the spavined animal did not contract the disease before it had done much work. The prognosis is unfavorable if the affected joint is naturally weak, or if its formation, or make-up, is very defective, so that certain parts will have to sustain an unproportionately large share of weight and concussion; for instance, the median part of the joint in a hove-legged horse. The prognosis is also unfavorable if the horse had already contracted spavin while yet a colt, or before the same had done any work, as this may be regarded as a sure indication that in such an animal the predisposing causes are very strong. It is likewise unfavorable if the horse had already been unsuccessfully treated for spavin. The diagnosis is bad in all cases in which the morbid process and the morbid changes extend to the upper, or hinge, joint; or, in other words, if the bones forming this joint—the astragalus, calcaneum and the lower end of the tibia—have become diseased, because this is a joint that cannot be spared. The lameness caused by spavin or ring-bone can be removed only by causing the diseased bones to unite in such a way as to make the joint perfectly stiff and immovable; in other words, by producing ankylosis in such a joint. If this were done in a joint that cannot be spared, like the hinge-joint of the hock, provided the constant motion taking place in such a joint would permit it to ankylose, it would make the horse a worthless cripple.

In ring-bone the prognosis is, on the whole, less favorable than in spavin, even if the morbid process is limited to the coronet-joint, or joint between the first and second phalanges, which is the only one of the phalangeal joints that can be spared, while ankylosis in either the pastern or the hoof joint would cripple the horse. Still, ankylosis of the coronet-joint is not as readily produced as it is in the semi-movable joints in the lower part of the hock, because under normal condition more motion is taking place in the former than in the latter, and strict rest, as near absolute as possible, is one of the necessary conditions. Where that cannot be procured all attempts to produce ankylosis will be just as much in vain as attempts to cause a union of broken bones if the ends are kept in motion. This is also the reason why attempts to remove spavin—and ring-bone—lameness should not be made during the fly-season, and it further explains why the prognosis is not as good if the horse is restless, wild or excitable as it is if the horse is quiet and docile. The prognosis in ring-bone, therefore, is fair to good only if the morbid process is limited to the coronet-joint, and if at the same time the affected bones are naturally not too weak and the pastern neither too perpendicular nor too slanting. In all other cases the prognosis is more or less unfavorable, and is bad if the morbid process extends to the articular surfaces of either the hoof-joint or the pastern-joint.

In navicular disease the prognosis is always unfavorable, simply because ankylosis, even if the prospect of producing it were a good one, would cripple the horse. It is true the pain caused by navicular disease can be more or less removed, and when this is done the horse may not show much lameness, but the consequences of the means by which it is done are usually a great deal worse in the end than the disease.

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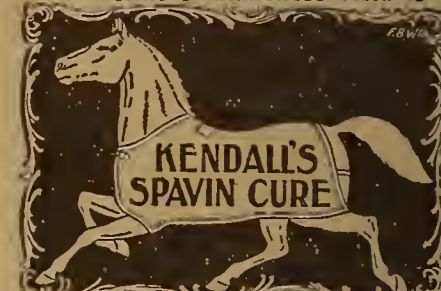
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GRANGE

Conducted by Mrs. Mary E. Lee
New Plymouth, Ohio

DURING the month of December many state granges will hold their annual sessions. That these meetings may be filled with work and pleasure we sincerely hope. It is a good thing to meet together once a year, exchange greetings and good cheer, and thereby help one another toward the goal of human happiness for which we are striving. We know that in all cases the deliberations will be of marked interest. We hope that the recommendations made will be wise, just and expedient.

✽

COULD not our farmers as they meet together from all parts of the state discuss the labor problem and arrive at some satisfactory conclusion? It is apparent that the demand exceeds the supply. That in a neighborhood where one hundred farmers employ help and there are but fifty laborers it is patent that over half the farmers must go without help. If the labor cannot be secured, will the farmer have to practise a different system of farming? Will this lead to specialization? What source is the best from which to draw labor? Cannot some means be devised whereby the farmer will know something of the qualifications of the laborers whom he imports? Would it not be profitable for those who are in need of help to employ an agent to go to the glutted labor markets and secure that help which will be most satisfactory to the farmer? Isn't there an opportunity for helpful co-operation? Observation and history teach one fact—that wherever there is a need some one will be ready to make it his business to supply that need. That is, some shrewd, energetic man will see an opportunity for opening a bureau to supply farmers with help. He will need to be paid for his services. Now, we feel that in many cases we can dispense with the expensive middleman. Is there not here an opportunity to prove the true value of a co-operative enterprise? Surely no better opportunity for getting together presents itself than at our annual sessions, and no need is more pressing than that of labor. If the grange could solve that one problem of having a supply of good labor to meet all demands it would reap a large share of gain and comfort, besides a wave of popularity.

✽

EVERY state grange session is burdened with a lot of resolutions. Each delegate feels that he can discharge his debt to God and humanity best by getting his pet resolution safely through the hands of the committee. If it is adopted by the grange he is supremely happy. He plumes himself on his superior ability in "handling" a committee. He is urbanity itself. His face wears an expansive smile. He feels very good. No doubt he thinks, with a sort of unctuous joy, that he is ready for heaven! And why should he not be? Let him look around and see the disappointed faces about him. The chief end in life is to get a resolution adopted, and some have missed that end. He hasn't; he is superior, and is happy in his superiority. And the resolutions! It takes an hour to read them. They look well, sound well. This day marks the birth of a new order of things. Men clap their hands and women wave handkerchiefs in exultation, as they drink in the well-rounded sentences. Surely a new era has dawned!

There will be no more hardship and no more trouble for this weary world of ours; and they go out and dine. They are very hungry. The exultation is an excellent appetizer. It is not of the kind that Plato or Paul felt. These philosophers forgot their material bodies in the contemplation of the sublime. The excellent dinner is eaten, and our friend's faith in humanity is strengthened. But he has no time to rest; not he. Others may. It is with pity rather than envy that he looks on these easy-going mortals. He has thought of a new resolution. It is just

possible that the world, so used to going wrong, may tire of the straight course, and his resolution will slip in a spike to push it along. He will see to it immediately. "Ah, good-morning, Mr. World!" cries he, stopping to grasp the hand of a very aged personage. "Beautiful day, glorious day!" "Oh, I don't know. Can't see much difference in days," answers Mr. World. "Ah, but you haven't heard the news. We have just had a most interesting session. We have passed resolutions that will revolutionize matters. Just now I am hurrying to the hall to buttonhole a few delegates. I have a new resolution I believe will effectually check any retrograde movement. See you later."

"Wait! What are your resolutions?" says Mr. World. "I really regret that I haven't time enough to tell you," replies our friend. "The evening papers will be full of the news. I want to get my resolutions in in time to be published with the rest!" But Mr. World is used to having his own way. He doesn't say much, but he wins all the same. He interposes his vast frame. "Well, if I must stop, I will. Only don't detain me long. I have much to do. So much depends on me, you know." "I see. What century was so happy as to have the honor of your birth?" "Nineteenth," answers our friend, proudly. "Greatest century ever known." "Um, um," replies Mr. World. "Pity you weren't born a few million years sooner. Saved me lots of trouble. Read your resolutions!" Our friend draws out a voluminous roll. He reads it with much emphasis. He expects Mr. World to stand agape with wonder. Not so. Mr. World knows himself and every one else. "What do you think of them?" asks our friend, rather crestfallen. "Sounds well. Heard 'em a few thousand times. But what are you going to do with them?" "Publish them, of course." This with some pride and asperity. "But what are you going to do with them? What actual benefit will you derive from them? What have you said that has not been said before? What is your plan of instructing and enthusing the great mass of farmers? In short, what is the worth of your resolutions?"

Our friend is staggered. He wisely says nothing. Mr. World continues, "These same resolutions have been passed year after year. Every society has the same sentiments embodied in one form or another. If you had time I might tell you of many interesting meetings I have spent with the men of a few thousand years ago discussing these same questions with exactly the same ardor that you are doing. But I want to ask you if you have reaped any decided benefit from the resolutions passed last year?" "I can't say that I have." "Or the year before?" "No, sir." "Or the year before that?" "Why, why, sir," stammers our friend, "everything that is said or done in the interest of humanity is a help." "Answer my question!" says Mr. World, sternly. "Have you reaped any decided benefit from these resolutions?" "No, sir." "Why, then, do you spend so much time and energy in passing them?" "What shall I do?" asks our friend. "Chuck that bundle into the fire. Tell them that it was lost, and offer a big reward for the finding of the same; then go to work."

"Shall I tell you how these long columns of news would have been received? Some good souls would have rejoiced that the farming class was so strongly organized. Others would have read the report as they do everything else in the paper, and forget it the next minute in the exciting details of a murder or a divorce scandal. That class of business men who look after the little matters of public concern would smile complacently and say, 'Nothing to fear from that source.' You yourself will forget about the matter by the time spring work calls you to duty." "But our constituents expect us to work while here." "Work? Of course you must! Do the hardest work that you ever did in your life. Devise, if you can, some means to aid the farmer and his family in their battle for life. Your own observation of the needs will help you to more intelligently supply the means. As to the matters of public concern, center all your forces on two, not more

than three, points at issue. Say to your legislative committee, 'There is money for your legitimate expenses. If you need more men or more money wire us. Use every honorable method to secure the enactment of these laws. We will go home and talk the matter up among our local granges. Whenever you need our help wire us and we will respond.' Don't scatter your fire. Don't go into the battle untrained and with small supplies. If you do you will be beaten. Then send this report to the newspapers: 'State grange met in annual session. Delegates present from every county in the state. No business of importance transacted!' The careless reader will not see it. The careful one will say, 'If there is no matter of importance before the body, why does it remain in session so long? And why is it so quiet? Nothing to do and nothing to say means noise and hurrah! That convention means business.'

"The right sort will be glad, because he knows that you are actuated by noble motives; and the bad sort will say among themselves. 'The farmers have left off talking and gone to work. Better let them have what they are after.' Don't you see the result?" "I do," answers our friend. "You will think us foolish." "No, no," replies Mr. World. "I know the aspirations and limitations of men. Your hearts are right. I want to see your actions correspond to the worth of your thoughts. I wish you success. Good-day." And with mutual good wishes they separate. Will our friend learn wisdom of Mr. World? I think he will. He told me confidentially that he expected to finish this grange convention with no thought save that of the highest good to the greatest number. I think if he meets his duties with this earnest resolve he will meet with a large share of success.

✽

WE PRESENT in this issue a letter from W. J. Bilson, of Kansas, answering our inquiry concerning farm labor. All letters so far received speak of the scarcity of help. There are various opinions as to the cause, or causes, of this scarcity. There is a wide difference of opinion as to what wage paid the employer best, that of the past or present. We will give the result of this inquiry in a subsequent issue. We hope to hear from others. Please preserve the papers containing the questions and answers, that you may keep the matter in mind. A few things seem apparent: The farmers are compelled to depend largely on unskilled labor. There is a growing demand for skilled laborers on the farm. The farmers appear willing to pay a larger wage, but they want increased skill. They pay now for the quality of labor received, all that their business will bear.

FARM LABOR

1. There is a scarcity of farm laborers in this, Greenwood County, Kansas.
2. The laborers are all native white men.
3. Wages are as good as they were ten years ago. I don't know anything about the wages of twenty-five or fifty years ago.
4. The wages paid ten years ago paid me better returns than now. The reason is land cost less then than now, and I received just as good prices as at present.
5. The average farm-hand receives \$18 a month, and his board.
6. About eight months—from March to November. Of course, there is some employment during the winter.
7. The first cause of this scarcity was the war. About one hundred young men from this county have gone to the Philippines. The second is that so soon as a young man who has any stamina in him can save up \$100 or so he buys a team of horses and a set of harness, and he rents some land and farms for himself. There is a fascination about this; he is his own master.
8. It is not true here that the city people are moving into the country.
9. There is a scarcity of domestic help here. It would be safe to say that fifty young women could get ready employment here at Eureka, with respectable families, at from \$2 to \$2.50 a week.

W. J. BILSON.

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JUST BEFORE CHRISTMAS

By Frances Bennett Callaway



SINCE the star of Bethlehem first shone with soft, unquenchable radiance over the Christ-child's manger the light has never gone out of men's hearts at Christmas-time. Knowing the story of this star and all the traditions of Christmas night, how blessed and beautiful it is to be a little child those eager, joyful, expectant weeks just before Christmas. At such a season every whirling, fuzzy snowflake speaks of holidays, festivities, presents, good wishes; every snow-crusted roof possibly covers the house built of sugar in the fairy tale; even icicles suggest sugar-plums, and the filigree frost-pictures on the window-panes are silvery visions of dreams that are coming true. As for the shop windows, resplendent with dolls, games, toys, picture-books and confections, they are simply the border-lands of Paradise.

At last the night is come when the little shoe is carefully set outside the door, or the stocking hung by the chimney, while the children—rich in faith—conjecture what bulging mysterious parcels will fill them to bursting before morning; or, it may be, a Christmas tree is dragged in, to fill the whole house with resinous woodland odors and presently to bloom with glittering lights and be as wonderfully laden down with fruits as ever the trees that sparkled in Aladdin's garden.

If Santa Claus is any way puzzled as to what should be put into each child's shoe or stocking, or hung under the wax candles on the Christmas tree, he may be interested to read a few letters selected from a large package addressed to him by little children at this season of the year. With delightful frankness they give the very inside of a child's heart—a child's desires.

DEAR OLD SANTA:—

Please send me a drum, a jumping-jack and a horn. We will have the chimney cleaned out. Bring your sleigh and reindeer; there is lots of snow, and I have such fun with my sled.

Yours truly,

EARL.

DEAR SANTA CLAUS:—

I want for Christmas two books, a pair of skates and candy and nuts and a good Christmas dinner. Bring my mother a ring and some china dishes.

Yours truly,

JACK.

DEAR SANTA CLAUS:—

I would like a nice big dolly for Christmas, one with light, curly hair, that will open and shut its eyes, a big bag of candy, a picture-book and a nice new book-bag. If I have asked too much, Santa, don't give them all to me. Don't stay away, for there is plenty of snow, and don't forget to bring Snowflake, Frosty and Meg.

Your friend,

DOLLY..

Sylvia, whose home was in a weather-beaten cottage on a bleak and lonely hillside quite outside the village, heard her mother say one day that Santa Claus would not visit their family that year; that the children need not look for him.

This seemed very hard to the little girl, and after turning the matter over carefully in her mind she wrote a letter to Santa Claus, asking him if he would not reconsider this decision and come their way when he remembered other children. She reminded him how good her brothers and sisters had tried to be, and how much she had wished for a doll, but she would willingly go without one if he could only make up his mind to bring Tom a new jacket and Molly a flannel petticoat, and her mother some shoes and warm woolen stockings which she needed so very much.

This letter, addressed to Santa Claus in Star-land, was opened by the post-master, who handed it to his friend, the silver-haired, ruddy-cheeked lawyer, who usually took the part of Santa Claus at all the Christmas festivities. Inquiring into the case, the lawyer found that this family were good and worthy people, who, through the father's long illness, had been reduced to real need.

The little girl's letter was handed around and a generous purse soon made up for them.

It was just at dusk on that snowy Christmas evening that this poor family, in their bleak and lonely home, were surprised by the sound of sleigh-bells ringing and tingling merrily at their very door.

"Oh, I knew it! I knew he would come!" cried Sylvia, joyfully flinging wide the door; and there stood her veritable Santa Claus just as she had dreamed of him, in cap and fur coat and mittens powdered white with snow, and his arms heaped with so many bundles that the children had to help him in with them; and then he went back for more, and after that for more. There were all the provisions for a bountiful Christmas dinner, besides warm winter clothing for every one, and great bags of apples, candies and nuts, to say nothing of a rosy, smiling, flax-haired doll in a ravishing blue gown; and, last of all, the purse of money, which would buy long-needed food and medicine, to help him get well, was left in the invalid father's hand, for the kind-hearted lawyer had spent not a penny of it.

"I did not know a Christmas night could be like this!" cried the poor mother, wiping her streaming eyes.

"Nor I," said this good Santa Claus, feeling, as shouts of glee and silvery laughter followed him far into the storm, that not all the bank-accounts in the world could make him half so rich as this night's work.

ORIGINAL DESIGN FOR NETTED DOILY

Use No. 40 spool-thread.

Set 50 stitches on cord over bone mesh one fourth of an inch wide. Tie ends together, and work around and around.

First row—Net two stitches into every loop over mesh.

Second row—Net plain over mesh.

Third row—Net two into every loop over mesh.

Net two rows plain over mesh.

Net three rows plain over medium-sized knitting-needle.

Ninth row—Net two into every loop over mesh.

Eleventh row—Plain over mesh.

Twelfth row—* Net two into first

loop, one into second over mesh *: repeat from * to * all around.

Net four rows over needle.

Seventeenth row—Like twelfth row.

Net two rows plain over mesh.

Net four rows plain over needle.

Net three plain over mesh.

Net two plain over needle.

This doily is very full, and to show its beauty it must be stiffly starched, when it will sit up in flutes. The illustration is about one third of the complete size.

JOYCE CAVENDISH.

STATELY AND SEVERE

The overindulgent mother has been severely criticized of late, and much of the overbearing vanity and impertinence of the precocious youngsters of to-day is laid to her charge. In fact,

all the faults and follies of the "spoiled child" are supposed to be due to want of discipline and severity in the home regime.

But take the opposite type of this overindulgent parent—the one who is genuinely severe and stately and unmoved on all occasions—and this extreme is more to be deplored. We find her all about us, not only the haughty, stately society mother, the rule of whose life is one of repression, but even in the class of life where loving thoughtfulness, confidence and a certain amount of indulgence should be allowed to make up for some of the unavoidable hardships of life.

This mother, both stately and severe, has very decided views. I find, concerning the upbringing of her children. To her caresses are in some sense dangerous indulgences, to be avoided with care. They weaken the moral backbone, she says, and predispose the children to undesirable familiarities. If she kisses them at all—which is seldom—it is with lips kissing the air and her cheek turned to their cheek. Or she may be of the kind that pecks when it kisses—just a hurried, sharp, snipped-off kind of thing, like nothing so much as a bird pecking at a fruit-blossom.

She represses their childish confidences, chides their small complaints, throws back their tender love-longing for her arms, her lap, her bosom; is always cold, severe, correct, disciplining their natural outbursts of spontaneous expression even when she can find in them nothing naughty, and doing her duty to them, as she has conceived it, by the lack of love and the plentitude of correction.

According to her, human nature is a sad, sore blot on the fair face of creation; and "where only man is vile" sums up her human creed. She is resolved that her children shall be brands plucked from the burning—if perpetual severity of repression may prove the pincers by which they shall be rescued; and with the best intentions in the world she makes the lives of her little ones miserable, and establishes a barrier between herself and them, which, when they have grown to maturity, makes them practically strangers to her.

A very sensitive and loving-natured man, whose physical deformity and keen imagination, together with his strong affections, made love the very sunshine of his life in youth, and who withered and shrank within himself for want of it, made the statement recently that he never remembered his mother embracing him, nor calling him by a pet name, nor giving him an endearing epithet. She was a woman of fine intellect, and, in her own hard way, of fine moral character; but the grace of

in the past. The overindulgent mother may have her faults, it is true; but note the difference between her children when grown to manhood and womanhood (especially if they have enjoyed the confidence as well as the love and indulgence of an unselfish mother) and those of the mother who poses as stately and severe. Only a few comparisons will be necessary, and it will not be difficult to decide which is the wisest method of training.

P. W. HUMPHREYS.

TATTED STAR

Make a center ring of 2 d (doubles), 12 p (picots), with 4 d between each, 2 d, close; tie securely and cut the thread. Draw the first d of each leaf close to the last d of preceding leaf.



Make the first ring of the leaf as follows: 8 d, join to a p of center ring, 4 d, 1 p, 4 d, 1 p, 8 d, close.

First chain, using two threads, 2 d, 1 p, 2 d, 1 p, 2 d, 1 p, 2 d.

Second ring—10 d, join to last p of preceding ring (we will call this joining "a"), 4 d, 1 p, 8 d, close.

Second chain—Same as first.

Third ring—8 d, join to last p of preceding ring (joining "b"), 4 d, 1 p, 6 d, close.

Third chain—2 d, 1 p, 1 d, 1 p, 1 d, 1 p, 2 d.

Fourth ring—6 d, join to last p of preceding ring (joining "c"), 4 d, 1 p, 4 d, close.

Fourth chain—Like third.

Fifth ring at point of leaf—2 d, 1 p, 2 d, 1 p, 2 d, 1 p, 2 d, close. Now work back by making a chain same as third.

Sixth ring—4 d, join to last p of fourth ring, 4 d, join to joining "c," 6 d, close.

Sixth chain—Like third.

Seventh ring—6 d, join to joining "c," 4 d, join to joining "b," 8 d, close.

Seventh chain—Same as first.

Eighth ring—8 d, join to joining "b," 4 d, join to joining "a," 10 d, close.

Eighth chain—Same as first.

Ninth ring—8 d, join to joining "a," 4 d, join to second p of first ring, 4 d, join to next p of center ring, 8 d, close.

Proceed with second leaf same as first, joining the center p of first chain to middle p of last chain of preceding leaf. Make six leaves, fastening the last leaf to the first one. A center star surrounded by six others joined at the corresponding points makes a very pretty tidy. The leaves made in a row make a nice trimming for handkerchiefs and other articles. When used for this purpose make a small chain of 3 d, 1 p, 3 d, before beginning the next leaf. When the trimming is completed sew it to the article for which designed by the p of the rings and the small chains at the base of the leaves.

MRS. J. R. MACKINTOSH.

A LATE ARRIVAL

The following letter from Mrs. Serena Doolittle to her friend Elizabeth explains itself and may serve to inspire with renewed hope and courage many housekeepers yet wandering amid the labyrinthine mazes of the servant-girl problem in their vain attempts to solve it:

"BOXANZA PLACE, July 21, 1900.

"MY DEAR ELIZABETH:—

"From the hot and stifling atmosphere of the kitchen I have at last escaped. The dust and ashes of that dreaded region are shaken off my feet, and sack-cloth is no more my raiment. I am



now clothed like the lilies of the field, who neither toil nor spin, and so at this late day am enabled to provide Solomon with a modern rival. No longer do I dance attendance on the perennial relays of 'female help' sent from the intelligence-office:

"Vain delusions were they
Of an hour or a day."

"Their arrivals and departures are events of a past in which memory is loth to linger, and it is almost needless to say that when the necessity for their appearance ceased to exist permission to cut off the supply was joyfully dispatched to the fountain-head.

"After emancipation day dawned I changed my role with each new sunrise. The first day I was a bird let loose—flying from one thing to another in an ecstasy of freedom, yet alighting often, as if afraid of the wings so long unused. The next I became without warning an 'expansionist,' and began mentally extending my boundaries in all directions—from the mountains to the sea, and then to you. An alluring vista of opportunities spread itself out before my dazzled vision—things to see, to do, to possess; their names were legion. The third I sank slowly to my normal level—that of a sensible, practical, every-day woman.

"An unexpected stroke of good luck had turned my head, but the giddiness was over and the reaction had set in. I began making preparations for an eventual exodus, designing, however, to postpone it until the 'new broom' had become to some extent worn and wanted to its work.

"I imagine you are saying, 'What an exasperating preface! Has she taken out a patent on automatic housekeeping, or has she hypnotized Major [the Newfoundland] and set him to cooking?'"

"I have done neither of these, dear Elizabeth, but you must know that in the rapid progress of the world's history that most fascinating of all contributions to past literature, 'The Arabian Nights Entertainment,' shines forth as a prophecy, the fulfillment of which is at hand. Elizabeth, I say it with bated breath, a living descendant of the great race of the genii has taken up his abode within my humble kitchen! He is not, however, stationary there, for I often find him in other apartments, and wherever he goes the most remarkable results follow in the wake of his noiseless footsteps. Out of chaos order is evolved; out of confusion, peace.

"I have yet to discover the kind of work at which he is not an expert. The household linen waving upon the line in the Monday breezes—in itself a work of art when he has cleansed it—lends such enchantment to the scenery of my back dooryard that I go out to gaze upon it, as one would go in midsummer heat to gaze with rapture upon the perpetual snow of a mountain-top.

"The fish, flesh and fowl of his cooking would tempt the appetite of a professed epicure. I am sure that the eggs of the American eagle or some equally rare ingredients must enter into the concocting of his wonderful cakes, while nothing but foam from the cataract of Niagara, in the way of yeast, could produce such magical results in bread, bisenit and rolls.

"And, Elizabeth, all this work is but play to him. It is tossed off with such ease and such rapidity that one might imagine him to be playing a game of ball and enjoying it hugely. You will of course remember that all the genii of the Arabian Nights were renowned for the strength they possessed.

"I must not forget to tell you that my sympathies are off on an indefinite furlough. They were enlisted long ago, and have stood on guard for years, like 'minute-men,' liable to be called out at any hour by a lame back, tired feet or a headache. In the present happy condition of things they may soon doff their armor and retire permanently from active service.

"I know you are asking by this time where he came from and how I secured him. Where did the genii ever come from? They came down through the ceiling, or the earth opened to let them emerge. Don't you remember? The representative of that far-famed race whose praises I now sing must have

come upon the crest of the last warm wave, for he suddenly appeared on the kitchen piazza and asked for work. I explained to him that the outdoor work of this meage consisted principally of caring for the Doctor's horses and of periodical manipulations with a lawn-mower; that a youth of tender years was already employed to perform these functions—work entirely unsuited to one of his surprising stature and robust frame.

"I would not do those things," he remarked, contemptuously. "I am large and strong; I can do the housework."

"Housework!" echoed I, breathlessly. "Are you not a coachman, or a gardener, or a wood-sawyer, or—something?"

"Yes, madam," he replied, with a slow, patronizing smile; "I am a housekeeper!"

"That was enough—not only a frank admission of the fact that housework requires size and strength on the part of one who would attempt it, but the ability and will to undertake it himself. The combination was irresistible. The door flew wide open and he was tendered a position on the spot, which I sincerely hope he may hold during life. All questions on both sides were exhausted on that initial morning. There have been none since; there has been no need. Two meager items of information have been vouchsafed—his name is Prime; his trade is housekeeping, regularly learned; therefore, I can now declare with truth that he is a prime housekeeper.

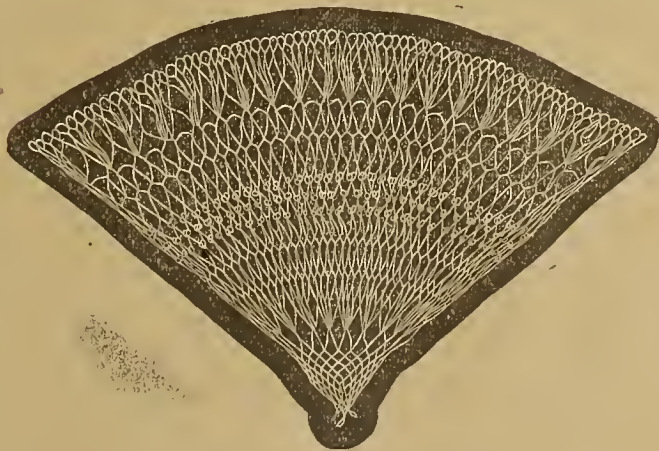
"Just think, Elizabeth, the great problem of the age—the one that has defied the wits of all the strong-minded women—the 'servant-girl problem'—is solved, or rather dissolved, for there will be no servant-girl in the future. Let her turn herself into a dressmaker, a milliner, a school-teacher, a stenographer, a type-writer. I do not care: her reign is over. A man 'large and strong' has taken her place, and the latest product of the nineteenth century will prove the resident joy and solace of the twentieth, for the male housekeeper has 'arrived,' and has come to stay.

"I am, dear Elizabeth, your faithful, long-suffering but now triumphant friend."
LILLA A. WHITNEY.

TWO ORIGINAL DESIGNS FOR NETTED DOILIES

DESIGN No. 1.—Use spool-thread No. 40, fine netting-needle, bone mesh one fourth of an inch wide and medium-fine knitting-needle. Cast on 50 stitches on end over mesh. Tie ends of cord together, and work around and around.

First row—Plain over mesh.
Second, third, fourth, fifth and sixth rows—Plain over knitting-needle.
Seventh row—Plain over mesh.
Eighth row—Net four into every stitch over mesh.
Ninth, tenth and eleventh rows—Plain over needle.
Twelfth row—Plain over mesh.
Thirteenth row—Plain over needle.
Fourteenth row—Plain over mesh.
Fifteenth, sixteenth and seventeenth rows—Net loop-stitch as follows: Wind



thread twice around knitting-needle, then net three stitches into loop. Repeat into every loop. This makes one long and two short stitches. Next row net only into long stitches.

Eighteenth row—Plain over mesh.
Nineteenth row—Three over mesh into every stitch.

Twentieth and twenty-first rows—Net plain over needle.

Now net eleven over needle. Turn, net ten. Turn, net nine, and so on until only one stitch remains. Break thread

and fasten into last loop of foundation eleven. Net eleven more and work off as before. Repeat until you have a border of points around doily.

DESIGN No. 2.—Cast on 50 stitches over mesh as directed for No. 1.

Net seven rows over needle.

Ninth row—Plain over mesh.

Tenth row—Net four into each loop over mesh.

Eleventh row—Plain over mesh.

Twelfth row—Plain over needle.

Thirteenth row—Plain over mesh.

Fourteenth row—Plain over needle.

Fifteenth row—Plain over mesh.

Now net three rows of loop-stitch.

Nineteenth row—Plain over mesh.

Twentieth row—Plain over needle.

Twenty-first row—Plain over mesh.

Twenty-second row—Plain over needle.

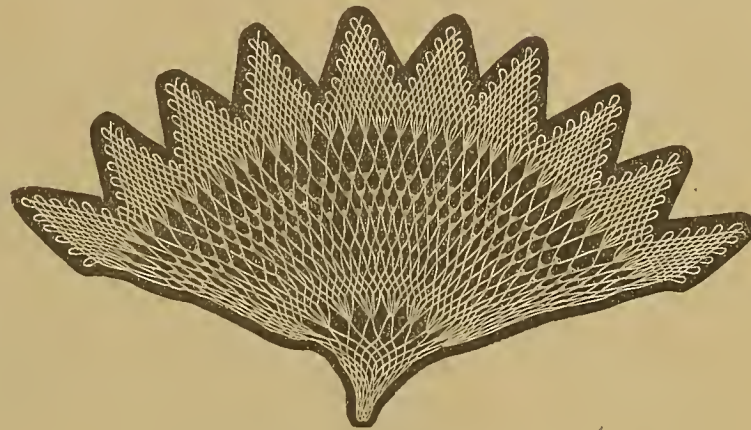
Twenty-third row—Net four into every other stitch over mesh.

Twenty-fourth row—Plain over mesh.
Finish off with two plain rows over needle.

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A WHITE CHRISTMAS

She had plenty of time, but very little money, for Christmas, so she set her wits to work long before that eventful



day and at last announced to her mother that the problem was solved.

"What problem?" asked her mother.

"The annual one. I think there will be a white Christmas this year."

"Why do you think that? It is rather early to predict Christmas weather."

"Nevertheless I am sure my friends will have a white one this year." And they did.

I wish you could have seen the dainty white array on this energetic young lady's bed as she deftly made up her holiday bundles. Not one cent had been spent for anything but white goods and thread, and not a large sum for these, yet the dainty garments were fit for a princess. Every piece was hand-made, and the fortunate recipients, many of whom were obliged to depend on the stores for ready-made things entirely, were delighted with the violet-scented articles.

The girl cousin soon to be a bride got a cambric night-gown trimmed with hemstitched ruffles that could not have been duplicated in the stores for less than four dollars, and one just like it went to the busy aunt whose troop of growing children prevented any but the plainest sewing. I think the older woman was more delighted with her gift than the younger, for it reminded her of the days when she made her own pretty trousseau years ago. The little girls of the family received snowy aprons and dresses, while their brothers found that Santa Claus had left them ties and ruffled waists.

Among the prettiest trifles were pincushions with washable covers. These covers were made from the bits of linen left over from the handkerchiefs, and had just enough drawn-work in the center to make them pretty without looking elaborate. They had double hemstitched ruffles, and were buttoned onto the fat cushions with flat pearl buttons. There were fine sheer lawn and linen handkerchiefs, some of which were plain and some with embroidered initials.

This young lady had a wide circle of friends, so the gifts were many and varied. Her father and brother were delighted with comfortable night-shirts,

unlike the skimpy ones found in the stores, and for her mother she had made pillow-shams with drawn-work. There were aprons and doilies and laundry-bags and other things too numerous to mention, but all in white.

"I would never have the patience to do all this," I said, when she showed them to me.

"It takes only a little time for each piece unless it is very large," she said. "The thing to do is to begin in time. Don't wait until the last minute. If you always keep a bit of sewing where you can reach it easily it is astonishing how quickly it is finished."

When I met her on New-Year's day she said her plan had been a decided success, for her friends were begging for a white Christmas every year.

HILDA RICHMOND.

✽

KEEP FAITH WITH THE CHILDREN

If the susceptibility of the child's nature to receive and hold impressions were fully realized we would stand appalled at our own carelessness in regard to these impressions. Parents and others constantly make promises to little children, which they have no intention of fulfilling, and excuse themselves by saying, "The children will

never think of it again." This is false reasoning. A promise made to a child should be as sacred as any other. If the parent does not respect his own promise, neither will the child, and a lesson of untruth will be instilled into the child's mind, and a hurt be given to his moral nature.

Many times a day in some households the children are threatened with punishment for the repetition of some mischief or offense. The offense is repeated, and the parent has either forgotten the threat, or being in a different mood, no attention is paid to it. Is it any wonder that children accustomed to such threats soon learn that they mean nothing, and lose all confidence in the parents' promises or fear of their threats? Fear of wrong-doing because of consequences to be suffered is the lowest motive to give a child for doing right.

While punishment is sometimes necessary, let us be exceedingly cautious how we appeal to a child's fear, and as careful to fulfill our promises of punishment when once made. As soon as possible lead the little minds to that higher ground of development—obedience through love.

I have known women who thought they were truthful and yet would say to a little child, "If you do that again, or if you do not stop crying, a bad man will come and get you." Of course, in time the child learns that this is a falsehood, and it ceases to have the desired effect.

A child cries to go with its mother, and she says, "I am not going;" and then later she slips out of the back door and goes away. When the child finds that he has been deceived in this way, what are the lessons taught but those of untruthfulness and deceit?

We meet many adults who seem to have no regard for their promises; if they can keep them without any inconvenience to themselves they do so, but otherwise the promise is broken. If they had been taught from early childhood that a promise should not be lightly made, but when once given should be kept, they would not look upon it so lightly now.

Be honest in every respect with the children, and do not urge them to give promises when they neither know nor understand what sacred engagements they are making or what loyalty or disloyalty the obligation may imply. If you would teach truthfulness, never let the child have occasion to doubt your word. If you promise or threaten, see that both are fulfilled, and thereby teach the children to trust your word and respect their own when given.

MAIDA McL.

[HOUSEHOLD CONCLUDED ON PAGE 17]

AN ALABAMA YANKEE

By Francis Lynde

CHAPTER IV.

AN UNWILLING WITNESS

It is a good thing for humanity that vindictive intentions are often as short-lived as the other kind.

Five minutes before the family enemy was halted by the three men in dusty line and marched away by two of them Alan thought he could rejoice in the sharpest misfortune which could befall Jasper Garth.

But when, from behind his tree a few feet distant, he saw the arrest and heard the sentence pronounced he was struck dumb at the sudden and awful fulfillment of his vengeful wish.

Before he could make up his mind what to do or if anything could be done the two enlisted men had taken Garth away. The Lieutenant was about to follow when he was confronted by a stammering boy.

"S-s-say," said the boy, "I w-wish to goodness you-all wouldn't hang that old man!"

"Oh, you do," said the Lieutenant. "Now, who might you be?"

There are times when coherence is not to be had at any price and the simplest question is blankly unanswerable. Alan had fallen upon one of these times, and in the bewilderment of it he could no more have told his name than he could have squared the circle. There was only one clear idea in the chaotic jumble, and that was that Jasper Garth was going to be hanged and that he was in a certain sense responsible for it.

"It's just awful!" he shuddered. "And I—I wished it. Oh, please can't you let him go just this once?"

The young officer looked at the lad curiously. "Are you his son?" he asked.

"No, I'm not his son; he's no kin to me at all. But I—I've known him ever since I can recollect, and he and my father and all of us used to be such good friends! It'll just kill Aunt Hannah and Ellie and Dick!"

"You seem to know a good deal about him, boy. I think I shall have to take you to the Colonel, too. Who is your father?"

"His name is Stephen Joyce. We're Uncle Jasp' Garth's nearest neighbors. We're 'Alabama Yankees,' you know."

"Oh, you are? Then I should think you'd be glad to have this old rascal get his deserts. You say your father and he used to be friends? I'll warrant they are not friends now, are they?"

Alan said "no," wishing from the bottom of his heart that it might truthfully be "yes."

"And I guess you know a good deal about his connection with the guerrillas, don't you?"

Alan nodded.

"Tell me," said the Lieutenant, briefly.

"Seth Byers is his cousin," Alan admitted, reluctantly.

"Did you ever know of his harboring the Byers gang?"

Alan would have given worlds to be able to say "no" this time, but the truth must be told.

"I have known of it—just once," he faltered.

"When was that?"

"Night before last."

The Lieutenant hooked up his sword. "I think you'll have to come with me to the Colonel. We've been hearing of this old fellow ever since we crossed the river. There's evidence enough in already to hang him, but the Colonel will be glad to have it corroborated by an eye-witness who is the son of a loyal man. Come on."

The "come on" was a request, but Alan knew well enough it would be a command if he hesitated, so he trudged along beside the young officer, hoping that anything from an accident to an earthquake would come between to save him from telling the story which would sign Jasper Garth's death-warrant.

Their route led through the forest and away from the brow of the mountain. Alan thought they must be a long way from the main body of the army. There was no sign of life in the quiet wood, and no sounds in the still air save a curious "klopf, klopf, klopf," which Alan could compare to nothing he had ever heard. When this noise grew to be a jarring tremor he ventured to ask what it was.

"Don't you know?" said the Lieutenant. "That is the tramp of a marching column. It's our left wing swinging into position for the night."

A little farther on they came out into a glade in the forest and saw the moving column. A country road ran along the opposite side of the glade, and the column filled it from ditch to ditch. The regiments were marching in open order, with flanking lines of skirmishers sweeping the forest to right and left like two great wings.

Save the skirmish at the mouth of Nick-a-jack it was Alan's first sight of war at short range, and for the moment he forgot

his father's besetment and Jasper Garth's peril; forgot everything in the enthusiasm stirred up by the sight of this mighty human leviathan jarring the solid earth with its measured "klopf, klopf."

They had to wait for a chance to cross the line of march, and before the apparently endless procession of dusty hundreds had passed the Civil War was as good as ended for Alan. Surely nothing could withstand the steady onrush of these mighty marching hosts. The dust was choking, but he swung his hat and shouted till his throat was parched and the cheers were no more than soundless gasps.

"You're loyal all right," said the Lieutenant, when they had finally made shift to dodge between the horses of the column's battery. "Gets next to you, doesn't it?"

Alan nodded. What with the dust and the exhaustion of spent enthusiasm speech was not in him.

"Well, that's only a drop in the bucket! What you have seen was only a part of one division. Think the Johnnies will stay and fight us?"

"It looks like it wouldn't be any use, but they'll fight," asserted Alan, whose loyalty

That's good. It's a pretty straight case, but it is well enough to make sure." And then to Alan, "Tell us what you know, my boy."

Alan looked around helplessly for a way of escape, but found none.

"I—I'd a good deal rather not," he stammered.

"But you must," the Colonel insisted. "Lieutenant Brinkerhoff tells me that you are the son of a loyal man. You must not try to shield your country's enemies. Do you know this man Garth?"

"Yes, sir."

"Isn't it true that the Byers gang has never molested him? That his is the only place on the mountain that hasn't been raided?"

"Yes, sir; but Seth Byers and Uncle Jasp' are cousins, you know."

"Exactly. Now tell me, doesn't your father believe that Garth is in league with the guerrillas?"

"I—I'm afraid he does, sir."

"What reason has he for believing it?"

"Why, er—a—we had all of our stock run off last spring, and the day before the Garth cattle were all driven up and shut in. Father allowed maybe Uncle Jasp' had been warned."

Alan went back to this because he was anxious to keep as far as possible away from the later happenings.

The Colonel made a note on his pocket-tablet and went on. "Now tell me what you saw night before last."

Alan was about to repeat that he would much rather not, but the masterful eyes compelled him.

"I saw the 'Free Company' at the Garth place," he admitted, reluctantly. "Their

There was no hope for Jasper Garth; and losing sight of the presumable justness of the penalty, Alan turned his face away and choked in sheer pity when he saw the guard marching the crippled old man up to the Colonel's tent.

He knew the prisoner was going up for sentence and not for trial, and as the event proved his premonitions were true. When he looked back from the second guard-line the two soldiers were already marching the condemned one back to the log cabin, which served as the temporary guard-house for the regimental night bivouac.

Alan looked, and looked again. The old man was limping dejectedly between the two soldiers, with his hands behind him and his chin on his breast; a pathetic picture of despair which Alan made sure would haunt him to his dying day.

The Lieutenant saw the look and the remorseful sorrow of it, and when they were clear of the camp tried to make the boy's burden a little easier to bear.

"I can understand how you feel about it, my boy; and you mustn't take it so hard. These outlaws are a curse to every honest man in the country, and those who harbor them are more dangerous than the guerrillas themselves. It's pretty hard to have to accuse an old neighbor, but you must look it fairly in the face. He is your father's enemy, and the enemy of law and order on both sides. Besides, you can comfort yourself with the thought that you had to tell the truth."

Alan's rejoinder was to the effect that nothing would ever comfort him any more.

"Oh, I wouldn't say that," objected the Lieutenant. "You're young yet."

"But you don't know how good Uncle Jasp' used to be to us children," said Alan, remembering, as he was constrained to, only the old-time kindnesses. "He never used to make any difference between us and Ellie and Dick. Why, I was named for him—only I've dropped the 'Jasper' now—and the first colt I ever had was one that he gave me."

Lieutenant Brinkerhoff went silent at that. It was his third year of war, but he had not yet become hardened to all the sorrowful heart-wrenchings that war brings in its train.

To have his misery to himself Alan dropped a pace in the rear, and in that order they crossed the road of the marching column—now an ankle-deep river of dust—and then threaded the forest beyond.

The sunset glow was just beginning to tinge the sky, and seeing it through the darkling pines Alan was reminded of the lapse of time and of that part of his errand which had been completely forgotten in the arrest of Jasper Garth and all that had followed. He had been in the very heart of the Federal army and had never once thought of asking for his brother!

"Pity's sake!" he exclaimed, overtaking the Lieutenant at a bound. "I most forgot the very thing I came out for! Do you know Lieutenant Robert Joyce, 'n' where I could find him?"

"Captain Robert Joyce, you mean, don't you? He is detailed on special duty with the advance skirmish-line, and I don't believe you could find him if you should try. Are you folks relatives of his? By the way, come to think of it, you look enough like him to be his brother."

"I am his brother," Alan said; "but he isn't a captain, he's a lieutenant."

Lieutenant Brinkerhoff smiled. "He's been a captain since the fight at Murfreesboro. Hadn't you heard?"

"No; letters couldn't come through, you know—not to us down here."

"Oh, that's so. Now I remember it, Joyce did tell me he was an Alabamian from these parts, and—why, yes, that's why he was detailed on the advance line; he knows the country."

"I should think he did; he knows every gully and hog-wash on the mountain. Don't you reckon I could find him if I tried? I've just pretty nearly got to. I don't know what made me forget it even for a minute; but we're in a terrible fix at home. We're likely to be raided this very night if I don't find Bob."

"How is that? Who is going to raid you?"

"Why, the hushwhackers. Father has been keeping his money in the house because it wasn't safe to put it in a bank anywhere, and Seth Byers knows about it. We expected 'em last night, and father sat up all night after he'd sent mother and Mary away. They didn't come, but they're coming to-night sure."

"How do you know?"

"Because I—" Alan stopped in mid-career, and then went on, remembering that nothing he could say would make it any worse for Jasper Garth now. "Because I heard Jasper Garth telling another man that it was set for to-night. He—er—that is, I reckon he was on his way to find Seth Byers when you caught him."

"Oh! And you kept that out of the evidence? You've been brought up by Christian parents, my boy; that's pretty plain. Now, let me see; what had we better do about this? I don't know but the safest thing is to go back and ask the Colonel to detail a guard for you folks. Whereabouts is your house from here?"

"About two miles right over that way," said Alan, pointing out the direction. "It's on the road that runs along the brow of the mountain."



"HE SWUNG HIS HAT AND SHOUTED TILL HIS THROAT WAS PARCHED"

to the cause did not keep him from being loyal to his kind. "You'll have to just lick 'em clear out before they'll quit."

The young officer's smile was out of the wisdom of experience.

"We've been finding that out as we went along," he said, quietly. "They're brave enough."

On a wooded height beyond the road of the marching column they came to the brigade of which the Lieutenant's regiment formed a part. It had been in advance all day, and its halt was earlier than that of the rearward columns. Its tents were pitched, the guard-line was established, and camp-fires were burning here and there among the trees.

The Lieutenant led the way to the group of larger tents in the midst of the encampment, exchanged a few words with an orderly, and then Alan found himself in the presence of the Colonel and listening to the Lieutenant's report of the Garth arrest.

The listening was purely mechanical. Alan heard what the Lieutenant was saying, but only as a criminal hears the summing up of his case when he stands before the judge. The personality of the regimental commander helped out the figure. He was a masterful man, with fierce white mustaches and cold gray eyes of the kind that make equivocation impossible. Alan knew his turn would come presently, and he shivered when the Colonel said, "You say this boy knows about him?"

horses were hitched along the fence, and they were at the house getting supper."

The Colonel nodded.

"That will do; that proves it conclusively. There wasn't much doubt about it, but none of his other accusers had actually seen the guerrillas there. Lieutenant, take the boy through the lines and send him home. You want to go home, don't you?" This last to Alan.

Alan nodded. He could not have spoken if his life had hung upon it.

"All right; the Lieutenant will take you past the pickets. And say, Lieutenant, just pass the word to have the old man brought here as you go. We may as well settle his case while it's fresh. I'll have the papers made out and he can be sent to headquarters later on."

Alan caught his breath and wondered vaguely if he should ever be able to draw a free one again. In spite of the fact that he had told only the truth, and as little of it as possible, it was perfectly clear that the telling of it had twisted the final strand in the rope which was to hang Jasper Garth.

Like every one in the border country, Alan knew the temper of the Federal officers toward the outlaws. The whole Tennessee valley was still ringing with the story of the summary vengeance measured out to the guerrillas and their allies in middle Tennessee earlier in the year.

"Two miles, you say? If it's that near I think you needn't be afraid. Our left has orders to keep moving until dark, or so long as it doesn't strike the enemy in force, and the chances are that it will be all around you in two or three hours at the farthest. Then you'll be safe."

But Alan still hung hesitant. "I'd like to find Bob if I could," he said.

"I don't believe you'd have one chance in a hundred; and, anyway, he'll have an eye out for the bushwhackers. You trot along home and tell your father to cheer up; that the old flag will be waving over him before morning."

The talk had carried them beyond the advance picket-line in the little ravine of the holly tangle, and when Alan was free to run he ran, having disquieting reminders of the anxiety of those at home. In the upbubbling of relief springing out of the good news he was carrying the arrest and condemnation of the family enemy was pushed a little way back into the dimnesses; but the sorrowful remorse assailed him afresh as he ran past the Garth place.

It was still and quiet, with the shutters closed and the "quarters" apparently de-

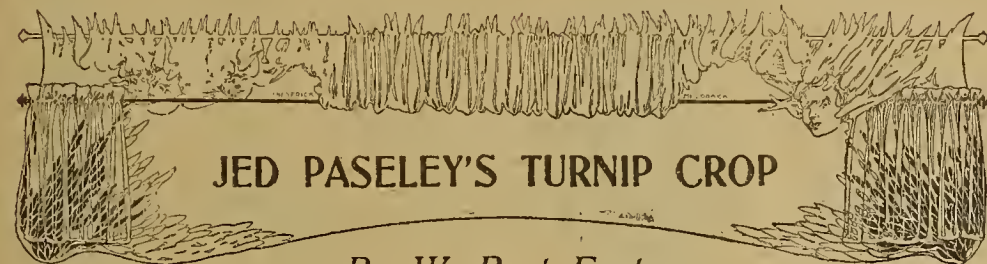
serted. Even the dogs did not come out to race with him as he scudded past, and he could not help thinking how much more desolate the home would be when the awful news should come.

Wherefore he ran the faster, and would not look back; ran as one burdened and pursued. For when all was said, was it not his vindictive wish and the incriminating story he had been forced to tell which had sent the crippled old man to his death?

So faring on, he came in due course to the bend in the road, to the Osage-orange dividing hedge, and finally to the straight stretch where he could see the end of the race. The sunset glow had faded out of the cloudless sky, and yet there seemed to be a lingering touch of it reflected in the gable-window of the old farm-house.

Alan vaulted the fence and dashed through the orchard with a great fear gripping at his throat and choking him. One glance at near hand was enough. The house was deserted; it had been freshly sacked, and the smoke of its burning was already oozing between the shingles over the western gable!

[TO BE CONTINUED]



By W. Bert Foster

NEVER remember that Jed was particularly popular with our fellows. If we were choosing sides for relieve, or starting a game of "three old cat," he usually had chores to do and couldn't play. Even foot-ball or hare and hounds seemed to have no charms for him, and almost every minute he had to himself outside of school he was pottering about that little place his mother and he were trying to keep out of the tax-collector's hands.

Jed's unselfishness in aiding his mother instead of spending his time on the ball-field never appealed to us. We all were sons of well-to-do farmers or country merchants, and beyond the chores which every boy has around the house our hours were free. Sometimes we'd go and hang over the Widow Paseley's fence and try to bother Jed while he was at work in the garden. It was the best-looking kitchen-garden in Elmville, and some of us were more than a little jealous of what we called "Jed's luck with garden truck." The fact that Jed's luck was nothing more than hard and patient labor did not impress us at the time.

But our jibes and chaffing couldn't freeze old Jed. His good-humored, freckled face, in which the mouth seemed simply an unusually wide slit, was always a-grin, and he gave us as good as we sent in the way of banter. And more than likely he'd work it so that before we were scarcely aware of the fact we'd be over the fence and working among the vegetables as hard as himself. I've even seen him get a scoffing boy into the truck-garden and down on his knees weeding the onion-bed, and I call that simply wonderful, for I never met a boy yet who did not thoroughly hate weeding onions.

Sometimes, after Jed had thus cajoled us into helping him, we were angry with ourselves and more than a little sheepish. But our elders respected him mightily for his ability in getting his mates to work; for a boy Jed was a shrewd student of human nature. In the fall some of the farmers would get Jed to take charge of their corn-huskings, and Jed was never short of hands to help him. We always had plenty of fun at "Jed's huskings," and we worked hard without knowing it until we felt it in our muscles the next morning.

And yet Jed could claim no popularity. He wore patched clothing, and never "treated," and we would have thought of holding a party at Black Jinny's cabin as quick as we would at the Widow Paseley's. I think that possibly one reason for Jed's lack of popularity was in the fact that his industry was often held up to us for an example by our elders, and however much a boy may admire a good example he can scarcely be said to love it.

Our best ball-ground was a piece of worn-out meadow adjoining the widow's cottage; that's why we were so often in Jed's vicinity and fell so easy a prey to his wiles. I know my father said that Jim and I had rather break our backs in the widow's garden than work fifteen minutes at the wood-pile at home. But then a boy who was smart enough to get up tournaments in hoeing and races in weed-pulling deserved all the help he got out of it, and the Widow Paseley made splendid ginger-cakes, and always was generous with them when we had worked hard.

But if there was one thing needed to establish Jed's unpopularity it was found when he planted his famous turnip crop. The meadow we used for a ball-ground belonged to Mr. Hughes, and Jed worked for the farmer one winter and got the use of a part of the meadow as pay. When we found him

plowing up our third-base line we held a council of war right then and there, and Jed was voted the meanest fellow in Elmville.

Of course, there was plenty of room left in the meadow for us to lay out another diamond; but Jed's explanation that he was obliged to use that portion of the ground which Mr. Hughes allowed him was scoffed at by all hands. We didn't see why he need plant his old turnips at all, and we proceeded to vote Jed to "Coveentry" and otherwise showed what we thought of his meanness.

When he set stakes up about the plowed field, and strung wires to keep out stray cattle, we cut the wires and drove Farmer Hughes' young stock into the turnip-patch. In this way we punished Jed for his meanness, and failed to see that our own actions were far more contemptible.

Jed wasn't a fellow to cry over misfortune, nor did he go to our parents and report us. He patched his fences and watched them more closely, and we didn't get a chance to turn the cattle in a second time.

He couldn't stop our crawling through the wires and making footpaths across his turnip-field, however. We never had cared to cross that corner of the pasture before; but now we made it a point to go home that way—and it didn't do the turnip crop any good, I can assure you.

Fortunately turnips can stand a good deal more than some vegetables, and they grew fairly well. Jed hoed them early and late, and though we missed the Widow Paseley's ginger-cakes, there were few of us who cared to risk becoming as unpopular as Jed by helping him. Some of the little fellows helped, but they didn't count. Jed had no time at all for play that spring and summer, and he even came to school late on occasion—and had to suffer for it, too, for Master Ambrose was an old-fashioned pedagogue and looked upon tardiness as a sin intolerable.

By fall we were all friendly with Jed, in an unobtrusive way, for it was hard to be "mad" with a fellow who never got mad himself or tried to "get square" if you treated him meanly. Still he was yet in Coventry, and a fellow was likely to lose caste with his chums if he showed any partiality for Jed's society. It took all of Jed's ingenuity to break down this feeling against him, and, incidentally, to repay us for the mean way in which we had treated him during the year, and I'll tell you how it came about.

Jed had little time for corn-huskings that fall, and I fancy he was afraid to take any such contracts from the neighboring farmers for fear he could not get enough of the fellows to help him. Early in November, however, news got around that he was going to have "a turnip-see" on his own place, and we were all secretly anxious to know what a turnip-see was like.

One day there appeared nailed to the Paseleys' front fence an announcement printed in Jed's "own fair hand," which at once became the principal topic of conversation among the boys. It read as follows:

 * TURNIP CUTTING! *
 * GRAND PRIZE TOURNAMENT! *
 * —ON— *
 * November 12th *
 * ONE DOLLAR Prize to the Successful *
 * Competitor! *
 * J. PASELEY. *
 * *****

I expect some of the grown folks chuckled over that sign, for they saw in it one of Jed's

shrewd schemes for setting the fellows to work. The turnips were many, and at that particular time the market price was high. For a fortnight Jed had been pulling them and flinging them into a pile in his mother's back yard, and there was a monstrous heap of them. It was really wonderful how those turnips had grown considering the depredations of the cows and the base-ball players. The summit of the heap was nearly to the eaves of the widow's little brown cottage. Few farmers in our part of the state had raised good crops of roots, and if Jed could get his turnips into the city at once he would stand to make an excellent thing out of them. It would have taken him, alone and unaided, a week or more to cut the tops from all those roots.

The prize of one dollar looked big in our eyes. Pocket-money was hard to come by; many a country boy in my day seldom saw as much during the whole year, even though his father might be a well-to-do farmer or a country merchant. We saved our pennies half a year for the county fair, and were then "shy" at Christmas-time. That a couple of men to help him cut his turnips would have cost Jed several dollars did not enter into our calculations.

By mutual consent the fact that intimacy with the owner of the turnips was tabooed was forgotten. We were all anxious to know what the rules for entering the "Grand Prize Tournament" might be, and for what the prize was to be given. To all Jed made the same reply:

"It don't cost you fellows nothin' to come in; but if you leave before the last turnip is topped you lose your chance of the prize. The dollar'll be given to the one who finds a certain turnip that's in the pile."

Beyond that Jed refused to say a word, and no amount of coaxing would get anything more explanatory out of him. In answer to our demands to know what sort of a turnip it was he had hidden in the pile he only said that he would know it, and that the fellow who found the turnip would surely get the dollar.

We had a night in which to think it over; but in the morning (it was Saturday, and we all did our chores early) pretty nearly half the boys in Elmville were in the Paseleys' yard. Jed had supplied blocks to sit upon, and sharp knives, and baskets in which to throw the turnips, while on the little piazza was a chopping-tray running over with ginger-cakes and the widow's water-pail full to the brim with lemonade. The sun shone warmly upon the great heaps of turnips, and we were soon at work.

Corn-shucking was nothing to that turnip-cutting scrape. I don't think I had ever realized before how closely roots packed together in a pile. Jed had a lot of barrels waiting under the shed, and as fast as the baskets were filled he emptied them into the barrels, and the work went merrily on.

At first, whenever a fellow found a particularly large turnip or one of peculiar shape a shout would arise from the assembled workers and Jed would be called upon to state whether that was not the root which drew the prize.

"No, that ain't the one," he would say, shaking his head; "but you're sure to find it if you keep on." And thus encouraged we redoubled our efforts to reduce the size of the pile of turnips.

Noon came, and some of us refused to leave the field for dinner, contenting ourselves with the ginger-cakes and lemonade. Jed gave all those who wished an hour to go home for dinner and return; but if they were gone over the hour their places in the contest were to be declared vacated. This reduced the circle of workers considerably, for some of the fellows were glad enough of an excuse for backing out.

To a number, however, that dollar looked big, and we hung on hour after hour until our fingers were sore and our wrists and the backs of our hands broken out with "prickly rash," caused by the rough leaves of the turnips. Jed moved about among us as jolly as could be, urging the backward ones and encouraging those who displayed the greatest industry. But as the pile decreased and that prize turnip did not appear some began to lose faith in Jedediah Paseley.

"You're foolin' us, Jed!" one rash worker declared, and threw down his knife, vowing he would work no more.

"I never lied to any of you yet," the owner of the turnip crop declared. "If you throw up the job now you lose your chance of getting the prize. The prize turnip is still in that heap; but had it been found already, the agreement was that you were all to stick to the job till the last turnip was cut. A good many fellows have backed out already. If anybody is to be accused of unfaithfulness it isn't me."

He had us there, and we worked doggedly on; but it was a sorry lot of boys who gathered around the last few turnips as the short November day settled into twilight. Most of those who had started so gaily in the tournament had given it up and either gone home angry or hung about the outskirts of the group of workers. Mrs. Paseley had filled up the cookie-tray again, but we were much too tired to be interested. All we cared about was to see the last of the turnips topped and learn who had won the prize.

There wasn't more than a bushel left, and

finally my brother Jim arose, kicked the pile vigorously, and threw down his knife.

"I ain't goin' to do another one!" he declared. "If that turnip had been in here we'd ha' found it before this. Jed's foolin' us."

Of course, I had to do what Jim did, and Larry Bates followed us. That left only two or three others, and seeing themselves laughed at by the crowd around all but Bennie Joyce gave it up. Bennie was one of the smallest fellows, but he had worked steadily all day, and though we jeered at and chaffed him unmercifully he stuck to that little heap of roots.

"I said I'd stick to it, and so did you fellows," he said, "and I'm goin' to do it."

Just then Jed came out of the house. He had a big silver dollar in his hand, and he walked over to where we stood around Bennie on his block. The little fellow sliced the top off the last turnip and flung it into the basket just as Jed arrived.

"Good for you, Bennie!" Jed exclaimed; "you've won it!" And he put the dollar into the little fellow's hand.

At that we all broke into loudly voiced demands as to how Bennie had won.

"Which turnip won the prize?" cried Jim, elbowing his way to Jed and looking as fierce as a turkey-cock. "You didn't show us which it was."

Jed coolly stooped and picked up the last turnip Bennie had flung into the basket. "That's it," he said. "The last turnip in the heap was the one which drew the prize; if you fellows had played fair and stuck to your bargain you'd all stood a show of getting it. Now, I guess you fellows and me is square!" he added, without regard to grammar; and when we recovered from the first flush of our anger we had to admit the exactness of his statement.

Jed's turnip crop netted him a sum large enough to pay the year's taxes on his mother's place and buy text-books for his first year's tuition at a certain city technical school. The whole town laughed over the turnip tournament, and though he might have been accused of taking a little advantage of the fellows, everybody who knew how we had treated him during the year declared it served us right.

Jed certainly had a great gift for getting people to work and keeping them working until his object was accomplished, and that trait had a deal to do with his obtaining the position he now holds, I suppose. He is the manager of a big construction company, and has hundreds of men under him, and when his firm built the railroad through Elmville some of the very boys who figured in his turnip-cutting contest were glad to work under Jed again.

GOOD MANNERS

Good manners are more important at home than elsewhere. As they cannot be put off and assumed, as a garment, we are able to form our opinion of a person's home manners by his manners in society. As a rule what are called "company manners" are as easily distinguishable as the counterfeit coin from the pure gold. A beautiful behavior is better than a beautiful form; it gives a higher pleasure than statues or pictures; it is the finest of the fine arts. How well is it that no one class has a monopoly of this "finest of fine arts." While favorable circumstances no doubt render good manners more common among persons moving in the higher spheres of society, there should, nevertheless, be no positive hindrance to the poorest classes practicing good manners toward each other. For what are good manners? They are the art of putting our associates at their ease. Whoever makes the finest people comfortable is the best-mannered person in the room, and nowhere is there so much opportunity for displaying good manners as in conversation. Well-mannered people do not talk too much. They are careful to bear in mind the meaning of the first syllable of the word conversation, con (with), that it means talking with another; they abstain from lecturing, and are as ready to listen as to be heard. They are neither impatient to interrupt others nor uneasy when interrupted themselves. Knowing that their anecdotes or sharp replies will keep, or need not find utterance at all, they give full attention to their companion, and do not by their looks show that they consider him a bore. Another rule observed by every good-mannered person besides that he should not be impatient to get in his word, is that a few brilliant flashes of silence should occur in conversation. Another rule is not to select one's self to talk about. It must be borne in mind that as a rule we and our concerns are of no more importance to others than they and their concerns are to us. Why, then, should we go over the annals of our lives generally, and our diseases in particular, to comparative strangers? Why should we review the hardships we have suffered in money matters, in love, or our domestic troubles, or why should we boast of our success? It is unnecessary to state that gossip or scandal-bearing is incompatible with good manners. "The occasions of silence," says Bishop Butler, "are obvious; mainly, when we have nothing to say, or nothing but what is better unsaid. If we must speak of our fellow-beings let it be of good, and if we have naught but bad to say of them, better not speak of them at all."—Sunday-School Times,

THE HEALTH HABIT

Just as Easy to Form as Any Other

We do not deliberately form our pet habits, but they are unconsciously acquired and grow as we grow, and by the time we learn they are hurting us we find them too strong to be easily broken.

Then why not form a good habit, a habit which will counteract the many bad ones; in other words, contract the unfashionable habit of being always well.

The best health habit to get into is to have and keep a vigorous stomach; if you have a healthy digestion you can drink your beloved coffee, smoke your favorite brand of tobacco, with little or no harm; the mischief begins when these things are forced upon the faithful stomach, without any assistance.

Form the habit of taking after meals some harmless but efficient digestive which will relieve the stomach of so much extra work.

Nature furnishes us with such digestives, and when they are combined in such a pleasant preparation as Stuart's Dyspepsia Tablets they give the overworked stomach just the necessary assistance to secure perfect digestion without any of the harmful effects of cathartics and similar drugs.

The habit of taking Stuart's Dyspepsia Tablets after meals is as necessary to the weak stomach as food itself, and, indeed, to get the benefit from food eaten nothing better, and certainly nothing safer, can be used.

Many families consider Stuart's Tablets as essential in the house as knives and forks.

They consist entirely of natural digestive principle without the effect or characteristics of drugs; they have no cathartic action, but simply go to work on the food eaten and digest it.

Take into account your bad habits and the expense they entail and then invest fifty cents in a box of Stuart's Dyspepsia Tablets and see if your digestion for the next month is not vastly improved.

Ask the clerk in any drug-store the name of the most successful and popular stomach remedy and he will say Stuart's.

Vapo-Cresolene.



CURES WHILE YOU SLEEP.

"It's Only Whooping Cough"

But 2,097 children died of it in London in one year. This often fatal disease is quickly checked and cured by vaporized Cresolene. Cresolene has been most successfully used for twenty years as a preventive of Croup, Coughs, Bronchitis, Asthma, Catarrh, Measles, Scarlet Fever, and other contagious diseases. Actual tests show that vaporized Cresolene kills the germs of Diphtheria. Send for descriptive booklet with testimonials. Sold by all druggists. Vapo-Cresolene Co., 150 Fulton St., New York.

\$100.00 REWARD

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GEOGRAPHICAL CONTEST

This is an honest contest. Every person who can rightly guess what State is represented in the above picture, can get a reward: when correctly answered it is the name of a State in the United States. You may win **Cash Reward**. This Contest is Free; it contains no elements of chance and does not require you to send any money with your reply; all correct patrons can get some cash without any trouble, expense or risk. The answer is on your map. Find it and win. Your guess costs nothing, so the cash you receive is clear gain. You have a right to one answer. Send it at once, naming what State you think is correct, and we positively guarantee to pay you a **Cash Reward** if correct. Address **BESS REMEDY CO., Dept. 36D, New York.**

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Its principle of action—that of **INJECTION AND SUCTION**—assures a thorough cleansing. All in one piece of best soft rubber, always ready for instant use. Beware of Imitations. The only genuine has signature of Dr. F. Wilhoft moulded on each syringe. Accept no other, but write for ILLUSTRATED BOOKLET of "Useful Information for Women Only" **FREE.**

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TWO RINGS FREE

Send name and address **no money**, and we will mail you 12 boxes of Comfort Cough Tablets. Will cure a cough in one day. Sell them for 10 cents a box. Send us the \$1.20 and we will mail you these two beautiful **SOLID GOLD** laid Rings. Will wear a lifetime. No money required till tablets are sold. We take back all not sold.

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A POPULAR WOMAN

Miss Helen M. Gould is to-day one of the most popular women in the United States. Indeed, her fame has gone wherever the English language is spoken, and she is praised for her good deeds.

Most wonderful of all is the fact that this young woman, who belongs to a family which is often cited as the typical example of the unfair working of the law of competition in America, has captured the love and reverence of the working-men. This phenomenon is worthy of a moment's attention. It shows that the working-men have no objection to wealth, and no hatred for those who enjoy it. Probably Miss Gould has done more to break down the barriers of distrust and suspicion between the rich and the poor than all the philanthropic reformers in the United States taken together.

She is probably as rich to-day as she was a year ago. She has given away many thousands of dollars, while probably her income has been increasing. Had she given even larger sums to some church or college no one would have blessed her. Mr. Rockefeller has given to churches and colleges ten and twenty times as much as she without at all exciting the love and reverence of working people.

What is the difference? What has Miss Gould done that others do not do? With the gift she has given the giver. She has not considered the costly furniture of her home too good for the usage of sick soldiers or wounded firemen. Her furniture was defaced, her rugs were soiled. It cost something to repair the damage, but a thousand dollars spent in that way captures more hearts and wins more love than millions spent in gifts which are not warmed by the loving service of the giver.

The poet Riley in one of his poems says that "There is nothing patheticker than just being rich!" It is likely that Miss Gould could echo that sentiment after a session of begging letters has been held and contents disposed of in various ways. The rich do not get the credit they deserve for patience under very trying circumstances. Think of receiving one thousand three hundred and three letters in a single week asking for amounts in the aggregate to a million and a half of dollars, from a bridal-dress to a college endowment! Would it not tempt one to long for a lone island somewhere, with an income just about sufficient to enable one to live in a respectable manner, where there was not a post-office within one hundred miles? Miss Gould has millions to give away, but she has millions of applications for all her surplus. If these applicants could be sifted out and the needy ones supplied and the others told to go about their business it would greatly simplify matters; but alas, she nor her secretaries are mind-readers, and the deserving are slighted in some cases and the undeserving are supplied. But here is the difficulty. The girl who wishes fifty dollars to buy a modest wedding-gown feels the importance of her request as much as the college professor who wants five hundred thousand for a college endowment, and perhaps does not need it half so bad as the waiting girl. Then there are charitable requests by the thousands to be considered, inquired into, turned down or supplied, as the occasion demands or the judgment of the donor indicates. The people in the common walks of life do not have these troubles to the same extent. They are called upon to feed an occasional tramp, or help by sympathy or otherwise some unfortunate neighbor, but do not receive many begging letters or have to spend a great deal of postage in declining to fulfill requests. There are some rich beggars who are more persistent than the poor and needy; and these generally have a knack of wheedling the benevolent out of very handsome sums of money by deceit and flattery. Many a man with a long, sanctimonious face and insinuating voice will succeed in getting a sum of money which really ought to go to the poor widow with downcast eyes who pleads for her six children fatherless and in want. Miss Gould is one of the bright stars in the benevolent world, and thousands of people who have been helped by her will ever bless her memory.—The Christian Register.

RICE IN RUSSIA

While rice has long been grown in Persia and the Transcaucasus, says the "Scientific American," it was almost unknown in the interior of Russia up to 1886, the supply being imported from India; and as it was subjected to high duty the poorer classes were not at all able to obtain it, and its use was naturally confined to the wealthier classes of the empire.

Russia first commenced the cultivation of rice in the early "eighties," and in 1888 the first steam rice-cleaning factory was opened at Baku, and 1,612 tons were produced the first year. There has been a steady increase in the production of rice, and there are now five rice-cleaning factories in operation, and the annual product is more than 48,000 tons. The demand for rice has increased, and it is now generally used by the peasants throughout the empire. The quality of the native product is equal to that of the imported product. The residue is utilized, the broken grain being made into starch and the flour given to hogs.—Boston Transcript.

That Terrible Headache

Pain back of your eyes?
Heavy pressure in your head? And are you sometimes faint and dizzy?
Is your tongue coated?
Bad taste in your mouth?
And does your food distress you?
Are you nervous and irritable? Do you often have the blues?
And are you troubled about sleeping?

Then your liver is all wrong.

But there's a cure. 'Tis the old reliable Ayer's Pill, easy to take and easy to operate. These Pills cure constipation, biliousness, sick headache, nausea, dyspepsia.

AYER'S PILLS

Make Wrong Livers Right.

A REMARKABLE INVENTION BY AN OHIOAN

As many of our readers may not know of its real comfort and blessings, we illustrate it in this issue.

A genius of Cincinnati has placed on the market a Vapor Bath Cabinet that has proven a blessing to every man, woman and child who has used it. It is an airtight, rubber-walled room, in which one rests on a chair, and with only the head outside, enjoys all the marvelous, cleansing, beautifying and curative elements of the famous Turkish, Russian, Sulphur, Hot Air or Vapor Baths, perfumed or medicated if desired, at home, in your own room, for 3 cents each.

Water Baths simply wash the surface. This Cabinet Vapor Bath, perfectly safe both Summer and Winter, opens the 5,000,000 pores of the skin, sweats out all the poisons and effete matter which cause disease, cleanses you inwardly and outwardly, purifies your blood, makes your eyes bright, your skin clear, your nerves strong, sleep sound, appetite good.

Astonishing is the improvement in health by its use. Hundreds of physicians have given up their practice to sell it. Thousands of letters have been written the inventors from users, showing its wonderful power.

Mr. A. B. Stockham, Chicago, editor "Tokology," recommends it highly, as also does John W. Pritchard, publisher "Christian Nation," New York City; the well-known evangelist, Rev. J. Howard Gardner; Hon. Chauncey M. Depew; Rev. C. M. Keith, editor "Holiness Advocate;" Horatio Page, of "New York Weekly Witness;" and Sabbath Reading; C. E. Sherin, of "World-Wide Missions," and thousands of others.

Mrs. Anna Woodrum, Thurman, Iowa, afflicted 10 years, was promptly cured of Nervous Prostration, Stomach, Kidney and Female Troubles, after medicine and doctors had failed. She recommends it to every woman as a God-sent blessing.

G. M. Lafferty, Covington, Kentucky, was compelled to quit business, walked on crutches, drugs and doctors failed, his Rheumatism was relieved by the first bath, entirely cured in 14 days.

Ira Gleason, a prominent citizen of Minnesota, cured himself of Lumbago, and his friends of Blood and Skin Diseases, Kidney Affections, Nervousness, Piles, etc., and made \$1,777.00 selling this Cabinet in 10 months. No reader can afford to be without this cabinet for a single day.

The makers guarantee results and assert positively, as do thousands of users, that this Cabinet will Purify the Blood, cure Nervousness, Weakness, Aches, Pains, Colds and Rheumatism (they offer \$50.00 reward for a case not relieved). Cures Sleeplessness, La Grippe, Neuralgia, Headaches, Indigestion, Piles, Dropsy, all Blood, Skin, Liver, Kidney and Urinary troubles. Has wonderful power to prevent and cure ailments peculiar to Ladies.

A Face and Head Steamer Attachment is furnished if desired, which cleanses the skin, beautifies the complexion, removes Pimples, Black-heads, Eruptions, and is a sure cure for all Skin Diseases, Eczema, Catarrh, Asthma, Bronchitis and throat troubles.

This is a genuine Cabinet with a real door; handsomely made; best materials; rubber-lined; heavy steel frame; top curtains; in fact, all the latest improvements; will last 20 years; not a cheap, flimsy affair, but strong, substantial, ready for use when received.

All our readers should write to-day to the World Mfg. Co., 2343 World Building, Cincinnati, Ohio, for valuable descriptive book and testimonials; or, better still, order a Cabinet at once. You won't be disappointed.

The price is wonderfully low, only \$5.00, complete with stove for heating, formulas for baths, and various ailments, and plain directions. Face Steamer, \$1.00 extra.

This firm is perfectly reliable; capital, \$100,000.00. Ship same day your remittance is received, and will refund your money after 30 days' use if the Cabinet is not just as represented.

Don't fail to send for booklet anyway.

This Cabinet is a wonderful seller for agents, and the firm offers special inducements to both men and women upon request, and to our knowledge many are making from \$100 to \$150 every month. Write them.

FREE TRIAL

YEARS

PIANO \$155.00 UP

Money back with interest if not satisfied with your bargain. Write today for our latest catalogue. It is free. It shows you the latest and most up-to-date **Organs and Pianos** on the market. It tells you all about our patent combination actions and orchestral attachments which imitate a great variety of stringed instruments. Something new and novel that never fails to please. A discount of \$10.00 on every Organ and \$20.00 on every Piano if you get our catalogue now. We sell for cash or on easy payments. No money in advance required. From factory to home. No agents. No middlemen's profits. Write today.

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Box 628

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WATCH AND CHAIN FOR ONE DAY'S WORK.

Boys and Girls can get a Nickel-Plated Watch, also a Chain and Charm for selling 1/2 doz. Packages of Blaine at 10 cents each. Send your full address by return mail and we will forward the Blaine, post-paid, and a large Premium List. No money required.

BLUINE CO., Box 392, Concord Junction, Mass.

Bona Fide Guaranteed Salary

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APPOINTING AGENTS!

Some to travel, others for local work. Rapid promotion. New brilliant lines, best plans, old-established house, ideal employment. **STAFFORD PRESS CO., New Haven, Conn.**



THE FRIENDLY HAND

When a man ain't got a cent, an' he's feeling
kind o' blue,
An' the clouds hang dark an' heavy an' won't
let the sunshine through,
It's a great thing, O my brethren, for a fel-
low just to lay
His hand upon your shoulder in a friendly
sort o' way!

It makes a man feel curious, it makes the
tear-drops start,
An' you sort o' feel a flutter in the region of
the heart.
You can't look up and meet his eyes, you
don't know what to say,
When his hand is on your shoulder in a
friendly sort o' way.

Oh, the world's a curious compound, with its
honey an' its gall,
With its cares an' bitter crosses; but a good
world, after all.
An' a good God must have made it—least-
ways, that's what I say
When a hand rests on my shoulder in a
friendly sort o' way.

—James Whitcomb Riley.

THE WIDOW'S MITE

THE man who has no pity for the
fatherless and widows fortu-
nately finds little sympathy in
this land. The life of Henry A.
Wise records the discomfiture of such
an oppressor.

There was an auction-sale in the little
house, and one after another the wid-
ow's few possessions fell beneath the
hammer. Presently the auctioneer took
up a large bowl, which happened to be
full of sugar, and the poor woman,
anxious to save its contents, hastened
into the next room to find something
in which to put it.

Just as she returned the auctioneer
cried, "Sold!" and the purchaser in-
sisted that the sugar was his. The widow
pleaded for the little that was much to
her, but the man was obdurate, and
murmurs of indignation arose from the
crowd. Angry at this demonstration,
the man turned, and his eye rested on
Mr. Wise.

"Mr. Wise," said he, "you are a lawyer.
Am I right or not? If you say I am
not, I will give back the sugar. If you
say I am, I am entitled to it, and I'll
keep it."

"My friend," replied Mr. Wise, in his
gentlest tone, "you put a delicate and
unpleasant responsibility on me. Hadn't
you better decide the matter for your-
self?"

"No," replied the fellow, curtly. "I
know what your opinion is going to be,
and I want you to give it so that this
whole crowd can hear it."

"Then," said Mr. Wise, "I advise you
that the sugar is yours. The widow
cannot take it from you. She has no
redress."

"Aha!" cried the man, turning to the
spectators. "What did I tell you?"

"Stop!" thundered Mr. Wise, whose
manner at once changed. "I've advised
you at your persistent request, as I can
prove by these people. It remains for
me to tell you that I charge you five
dollars for my advice, and I demand
immediate payment. If you trifle with
me in the matter of payment you will
most certainly regret it."

The man turned scarlet, and fumbling
in his wallet, produced a five-dollar bill.
The crowd yelled its approval, but sud-
denly became silent as Mr. Wise walked
up to the widow and said, "This money
is mine. I have earned it honestly.
Take it and buy more sugar for your
fatherless children."—Youth's Compan-
ion.

A BEAUTIFUL FATHER

"Tell your mother you've been very
good boys to-day," said a school-teacher
to two little new scholars.

"Oh," replied Timothy, "we hasn't
any mother."

"Who takes care of you?" she asked.
"Father does. We've got a beautiful
father. You ought to see him!"

"Who takes all the care of you when
he is at work?"

"He takes all the care before he goes

off in the morning and after he comes
back at night. He's a house-painter;
but there isn't any work this winter,
so he's doing laboring till spring comes.
He leaves us a warm breakfast when he
goes off, and we have bread and milk
for dinner, and a good supper when he
comes home, when he tells us stories
and plays on the fife, and cuts out beau-
tiful things for us with his jack-knife.
You ought to see our father and our
home; they are both so beautiful!"

Before long the teacher did see that
home and that father. The room was a
poor attic, graced with cheap pictures,
autumn leaves and other little trifles
that cost nothing. The father, who
was preparing the evening meal for his
motherless boys, was, at first glance,
only a rough, begrimed laborer; but
before the stranger had been in the
house ten minutes the room became a
palace and the man a magician.

His children had no idea they were
poor, nor were they with such a hero
as this to fight their battles for them.
This man, whose graceful spirit lighted
up the life of his children, was preach-
ing to all about him more than any
man in priestly robes. He was a man of
patience and submission to God's will,
showing how to make home happy un-
der any circumstances. He was rearing
his boys to put their shoulder to the
burdens of life, so as not to become
a burden to others in time to come.

He was, as his children said, "a beau-
tiful father" in the highest sense of the
word.—From Our Scrap-Book.

THE TOUCH THAT TELLS

A lady in the Bureau of Engraving at
Washington told me that when she was
appointed to her post she was miserably
anxious lest she should permit any spu-
rious bank-note to pass undetected;
most painfully did she scrutinize num-
bers, signs and signatures, until she was
pretty nearly consumed by solicitude.
At length a senior officer comforted her
by saying, "Do not worry. Be careful;
and when you have done that be tran-
quil, for the first time you touch bad
paper you will feel a shiver as though
you received a cold shower-bath." And
it is much the same in our moral life;
the soul also has a sensibility by which
we detect the spurious, the unclean and
the dangerous. Ever be watchful and
cautious; life has no place for presump-
tion. Scrutinize signs and signatures,
but remember at last that you must
know the sinister man, the spotted
book, the equivocal entertainment,
much as that official knows the counter-
feit paper—by a subtle touch which de-
fies comprehension. A man's brain is
not the wisest part of him. He has in-
stincts and perceptions far more pro-
found and infallible than his blundering
logic or prudential utilitarianism.—W.
L. Watkinson.

OPPORTUNITY

In one of the old Greek cities there
stood, long ago, a statue. Every trace
of it has vanished now. But there is
still in existence an epigram which
gives us an excellent description of it;
and as we read the words we can surely
discover the lesson which those wise
Greeks meant that the statue should
teach to every passer-by. The epigram
is in the form of a conversation between
a traveler and the statue:

"What is thy name, O statue?"
"I am called Opportunity."
"Who made thee?"
"Lysippus."
"Why art thou upon thy toes?"
"To show that I stay but a moment."
"Why hast thou wings on thy feet?"
"To show how quickly I pass by."
"But why is thy hair so long on thy
forehead?"
"That men may seize me as they meet
me."
"Why, then, is thy head so bald be-
hind?"
"To show that when I have once
passed I cannot be caught."—Christian
Press.

TEST FOR YOURSELF

The Wonderful Curative Properties of Swamp-Root

To Prove what this Famous New Dis-
covery will do for YOU, Readers of
the Farm and Fireside may have a
Sample Bottle Free by Mail.

It used to be considered that only urinary and blad-
der troubles were to be traced to the kidneys, but now
modern science proves that nearly all diseases have
their beginning in the disorder of these most impor-
tant organs.

The kidneys filter and purify the blood; that is their
work.

So when your kidneys are weak or out of order
you can understand how quickly your entire body is
affected, and how every organ seems to fail to do its
duty.

If you are sick or "feel badly," begin taking the
new discovery, Dr. Kilmer's Swamp-Root, because as
soon as your kidneys are well they will help all the
other organs to health. A trial will convince any one.

Among the many famous cures of Swamp-Root investi-
gated, the one which follows speaks in the highest terms
of the wonderful curative properties of this great kidney
remedy. Mrs. Mary Romans, Manchester, Texas, writes:
"I write to let you know I am well and owe my health to
Swamp-Root. I was so weak in my back that I could not sit
up but a little while at a time. Had to get up to urinate from
seven to ten times through the night; could sleep but a few
minutes at a time; would wake so tired I could hardly move;
felt like a heavy weight on my chest; feet cold and swelled
in daytime; headache all the time. I could not keep my mind
on one subject more than a few seconds at a time. I would
forget what I was talking about. I have taken six large
bottles of Swamp-Root, and am as well as ever I was. I can't
thank you enough for the wonderful good your Swamp-Root
did for me."

"I gave Swamp-Root to my little girl. She could not hold
her urine. It cured her. Seven bottles cured us both. If
you wish to print any of this letter, do so. I remain your
friend, and wish you success and long life. May you find
rest after your labors are finished."

MRS. MARY ROMANS,
Manchester, Texas.

January 4, 1900.

Weak and unhealthy kidneys are responsible for
many kinds of diseases, and if permitted to continue
much suffering with fatal results are sure to follow.
Kidney trouble irritates the nerves, makes you dizzy,
restless, sleepless and irritable. Makes you pass
water often during the day and obliges you to get up
many times during the night. Unhealthy kidneys
cause rheumatism, gravel, catarrh of the bladder, pain or dull ache in the back, joints and
muscles; makes your head ache and back ache, causes indigestion, stomach and liver
trouble; you get a sallow complexion; makes you feel as though you had heart trouble;

HEADACHE ALL THE TIME

Kidney and Bladder Troubles Make Men and Women
Miserable

(Swamp-Root is pleasant to take.)
In taking Swamp-Root you afford natu-
ral help to nature, for Swamp-Root is
the most perfect healer and gentle aid to
the kidneys that is known to medical
science.
If there is any doubt in your mind as
to your condition, take from your urine
on rising about four ounces, place it in a
glass or bottle and let it stand twenty-
four hours. If, on examination, it is
milky or cloudy, if there is a brick-dust
settling, or if small particles float about
in it, your kidneys are in need of im-
mediate attention.
If you are already convinced that
Swamp-Root is what you need, you can
purchase the regular fifty-cent and one
dollar size bottles at the drug-stores
everywhere.

SPECIAL NOTE.—The great kidney
remedy, Swamp-Root, is so remarkably
successful that a special arrangement has
been made by which all readers of the Farm
and Fireside who have not already tried it may have a sample bottle sent absolutely free by
mail. Also a book telling all about kidney and bladder troubles and containing many of
the thousands upon thousands of testimonial letters received from men and women cured by
Swamp-Root. Be sure and mention reading this generous offer in the Farm and Fireside
when sending your address to Dr. Kilmer & Co., Binghamton, N. Y.

Reversible LINENE Collars and Cuffs.

Stylish, convenient, economical. Made of
fine cloth, finished in
pure starch, and ex-
actly resemble fash-
ionable linen goods.
No Laundry Work
When soiled discard.
Ten Collars or five
pairs of Cuffs, 25cts.
By mail, 30cts. Send
6 cts. in stamps for sample collar or pair
of cuffs. Name size and style.
REVERSIBLE COLLAR CO., Dept. C, Boston, Mass.



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Stradivarius Model Violin, Case, Fine Bow,
extra set of Strings, box of Rosin, Finger-
board Chart. A fine instrument usually sold
at \$8.00 our price \$3.15. High-grade
guitar, beautiful mahogany finish, of sweet
tone with extra set of strings and Book of
Chords, fully guaranteed, equal to any re-
tailed at \$6.00 our price only \$2.30.
Mandolin, such as dealers sell for \$6 our
price only \$2.75. A #7 Banjo, nickel
plated rim, for \$3.00 also Cameras,
Graphophones and all kinds of Musical
Instruments shipped direct at lowest
wholesale prices, C.O.D. without one cent
in advance. **ORGANS & PIANOS**
of fine tone, elegant finish and thorough
workmanship, sent on 20, 30 or 60 days free
trial at one-half dealers prices. Pianos
from \$122.75 up. Organs from \$21.75 up.
A fine \$300 Kenwood piano for \$150. A \$75
Organ for \$30. All instruments fully
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\$800 Yearly to Christian Man or Woman to
qualify for permanent position of trust
in your home county to manage our cor-
respondence. Inclose self-addressed
stamped envelope to H. A. SHERMAN, General Sec'y,
Corcoran Bldg., Opp. U. S. Treasury, Washington, D. C.

SPECTACLES at wholesale. Send
wanted. COULTER OPTICAL CO., Chicago, Ill.

PEARL HANDLE KNIFE



FREE Boys and Girls can get this
beautiful Pearl Handle
Pocket Knife absolutely
Free for selling only four
boxes of our Great Cold and Headache
Tablets at 25 cents a box. Write today and we
will send the Tablets by mail postpaid, when
sold send us the money (\$1.00) and we will
send you this strong and durable Pocket
Knife which has four imported steel blades,
Pearl handle, German silver mountings, and
is fully warranted. A perfect beauty. Address
NATIONAL MEDICINE CO., Knife Dept. 17, New Haven, Conn.

THE CENSUS OF 1900

A booklet giving the population of all
cities of the United States of 25,000 and over
according to the census of 1900, has just been
issued by the Passenger department of the
Chicago, Milwaukee & St. Paul Railway,
and a copy of it may be obtained by sending
your address, with two-cent stamp to pay
postage, to the General Passenger Agent of
the Chicago, Milwaukee & St. Paul Railway,
Chicago, Illinois.

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and Ladies—get Watches, Cameras, Air Rifles, Rings
Silverware and other valuable premiums FREE
for selling 20 packages of our IMPERIAL
COURT PLASTER at 10c each. Send name
and address and we mail you 20 packets with
premium list and instructions. When sold send
us the \$2.00 and we will forward premium you
select. Write for outfit to-day, and be first
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PAYS to write for our 200-page free book.
Tells how men with small capital
can make money with a Magic
Lantern or Stereopticon.
McALLISTER, Mfg. Optician, 49 Nassau St., N. Y.

If afflicted with weak eyes, use Thompson's Eye Water

Beauty's Charm

Remarkable Discovery Whereby Every Lady May Now Attain the Perfect Bloom of Youth

A Free Trial Package Sent by Mail

It has remained for a Cincinnati woman to discover the secret of a perfect skin. She has at last found the key to feminine beauty. All the sighs and heartaches over a poor appearance may now



MRS. BERT KILEY

be banished, for it is within the means of every lady, young or middle-aged, to have the clearest and most refined complexion so dear to a woman's heart. Mrs. Bert Kiley, 103 Ward Ave., Bellevue, Kentucky, obtained a free trial package, and this is what she says: "I am perfectly delighted with the result. It works like magic." And what is still more pleasing and convincing Mme. M. Ribault, who discovered this great secret, sends free to every woman who writes a sufficient quantity of the beautifier to show her how easy it is to attain beauty when you know the simple truth and the right remedies.

It is not a face powder, cream, cosmetic or bleach, contains no oil, grease, paste, chemicals or poisons of any kind, and is absolutely pure.

Write to Mme. M. Ribault, 964 Elsa Building, Cincinnati, Ohio, and she will mail free, prepaid, in a plain sealed wrapper a free package of her wonderful beautifiers and you will always bless the day you wrote. Do not fail to write to-day.

FREE RHEUMATISM CURE!

If you have Rheumatism, Gout, Lumbago, Sciatica, etc., when doctors fail to cure you, you write to me and I will send you, free of cost, a trial package of the most wonderful remedy which cured me and thousands of others, among them cases of over forty years' standing. This is no humbug or deception, but an honest remedy that cured more than 50,000 persons in the past. Address JOHN A. SMITH, 748 Germania Bldg., Milwaukee, Wis.

FREE RUPTURE CURE!

If ruptured write to Dr. W. S. Rice, F. Main Street, Adams, New York, and he will send free a trial of his wonderful method. Whether skeptical or not get this free method and try the remarkable invention that cures without pain, danger, operation or detention from work. Write to-day. Don't wait.

WANTED RELIABLE MEN

In every locality to introduce and advertise our Treatments. Forty to One Hundred Dollars per month can be made by hustlers. Others are making big money. WHY NOT YOU? If in need of a good paying position, write at once for particulars.

THE EMPIRE MEDICINE CO., London, Ont., Can.

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Send for FREE Trial Bottle and Testimonials. Dr. Taft Bros. Medicine Co., 79 E. 130th St., N. Y. City.

DR. O. PHELPS BROWN'S Cures through the Pores. Precious Herbal Ointment. Nature's Priceless Remedy. 156 Liberty Street, Newburgh, N. Y.

How to Quit Tobacco.

A new discovery odorless and tasteless, that Ladies can give in coffee or any kind of food, quickly curing the patient without his knowledge. Anyone can have a free trial package by addressing Rogers Drug and Chemical Co., 1286 Fifth and Race Sts., Cincinnati, Ohio.

CANCER CURED WITH SOOTHING, BALMY OILS.

Cancer, Tumor, Catarrh, Piles, Fistula, Ulcer and all Skin and Womb Diseases. Write for Illustrated Book. Sent free. Address DR. BYE, Kansas City, Mo.

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Facial Blemishes, Tetter, Salt Rheum, Barber's Itch, Scald Head, Ring Worm, Itching Piles, Sore Eruptions, and all Skin diseases promptly cured by Spencer's Ointment. Sent to any address on receipt of 25c. A. O. PILSON, Pharmacist, 1327 W. Baltimore St., Baltimore, Md.

Myself cured, I will gladly inform any one addicted to Cocaine Morphine, Opium or Laudanum Of a never-failing harmless Home Cure. MRS. MARY D. BALDWIN, P. O. Box 1212, CHICAGO, ILLINOIS

PILES Sure cure, quick relief, sample treatment of our Red Cross Pile and Fistula Cure and Book mailed free. DR. REA & CO., Minneapolis, Minn.

RUPTURE CURED while you work. You pay \$4 when cured. No cure, no pay. ALEX. SPEIRS, Box 513, WESTBROOK, MAINE

TAPE-WORM Expelled Alive; head guaranteed. 2-cent stamp for booklet. BRYAN FIELD & CO., 182 State Street, Chicago.

If afflicted with weak eyes, use Thompson's Eye Water

DEAFNESS CURED OR NO PAY. C. H. ROWAN, MILWAUKEE, WIS.

COE'S ECZEMA CURE \$1 Large sample mailed free. Coe Chem. Co., Cleveland, O.

BED-WETTING CURED. Sample FREE. Dr. F. E. May, Bloomington, Ill.



SMILES



WHEN PA FIRS' ET TOBASCO SAUCE

When pa fir's et tobasco sauce—I'm smilin' 'bout it yet, Although his subsecent remarks I always shall regret.

We'd come to towu to see the sights, an' pa remarked to me,

"We'll eat at a houg-tong botel, an' sling some style," says he.

An' then be sort o' cast his eye among the plates an' all,

An' says, "That ketchup mus' be good, the hottle is so small;"

An' then he took a piece o' meat, an' covered it quite thick,

When pa fir's et tobasco sauce au' rose to make his kick.

It all comes hack so plain to me; I rikcollect it well;

He just was talkin' mild an' calm, an' theu he give a yell

An' tried to cave the ceilin' by buttin' with his head;

"Er-hooh! Er-hooh! Fire! Murder! Hooh!" I can't tell all he said.

But when they heard his heated words six women lef' the room,

An' said such language filled their souls with shame, an' also gloom;

But pa, he only gurgled some, and then be yelled again,

When fir's he et tobasco sauce an' told about it then.

We laid him out upon a hoard an' fanned him quite awhile,

An' pa, he sort o' gasped at first, an' then he tried to smile,

An' says, "Just beat a poker now, an' run it down my neck."

But when he got me out o' doors he says, "I want to get

That there blame ketchup receipt an' learn jus' how it's bet,

So I can try it ou the hoys when you an' me git hum,

Till they, too, think the condiment is mixed with Kingdom Come."

—San Francisco Examiner.

EDITOR'S DRAMATIC ENTRANCE

THAT a widely known editor, even though the father of a still more famous son, is sometimes caught off his guard was shown at a recent meeting in Philadelphia.

It was a great mass meeting at one of the theaters. Every seat was occupied, and crowds besieged the entrances. So turbulent was the crowd even at the stage door that it was locked on the inside. The messenger-boys for the newspapers were let out and in through a window of the green-room. The boys had to climb a high picket-fence, jump down into an inclosure, clamber upon a window-sill, and then, when the window was opened, drop down to the floor inside.

One of the boys had just been admitted. But before the window could be closed there loomed up, on the high sill, the form of a man. He was well dressed and of distinguished appearance. He had scaled the pointed iron pickets at the imminent risk of body and raiment, bad clambered to the sill, and stood there, poised like a bird about to flutter down from a tree-branch. His knees were crooked for the spring.

"Hello, there! Go back, you!" cried a policeman.

A shade of pained annoyance came over the climber's face.

"My good man, I'm Mr. Blank."

"Don't care! Can't get in; get back!"

The man became a trifle embarrassed, but persistently held his place. Still keeping his knees crooked in their bird-like position he fumbled in his pocket and drew forth a card.

"I'm a newspaper man. See! Here's my police card."

The policeman became tolerantly suave at once, and the man dropped to the floor, straightened his coat and cuffs, and walked smilingly to the stage. It was L. Clarke Davis, editor of the Philadelphia "Public Ledger," and the father of Richard Harding Davis.—Saturday Evening Post.

ONLY A LITTLE CHINESE TALK

"That fellow Bixby is th' derndest chap I ever see fer gittin' hold o' new-fangled notions. He come over t'other mornin' with his newspaper in his hand, an' sezee, 'It looks like them Germans was goin' to keep a tight hold on Kechahoo-Chahoo.'"

"Gesundheit," sez my daughter 'Lizabeth. She's been takin' a term in German at the high school, an' they always sez 'gesundheit' when a feller sneezes, jest fer politeness."

"I said th' Germans wuz goin' to hold on to Kechahoo-Chahoo," sez Bixby again.

"These dern summer colds ain't no joke,"

sez I. An' then his face got red an' he stiffened up.

"'Keeaboo-Chahoo,' he sez once more.

"It seems a leetle early fer hay-fever," sez I.

"I'll bet you call it 'Cow-Chow,' he sez, with a sneerin' sniff."

"No, I don't," sez I. 'Thet may be th' Latin fer it,' I sez, 'but I stick to hay-fever every time.'

"I ain't sneezin'!" sez Bixby, lookin' black-er'n thunder.

"'Wot wuz you doin'?" sez I.

"I wuz givin' you th' correck pernunciation of Kechahoo-Chahoo," he snorts.

"There you go again," I sez.

"My, but he was mad clean through!"

"I'm givin' you th' strickly correck pernunciation of—of thbet Chinese word right there," he sez, an' shoved his paper up against my nose.

"I looked at th' name he wuz p'intin' out, an' it wuz 'Kiau-Chan.'"

"Well," I sez, kind o' sarcastic-like, 'th' nex' time you come over here talkin' Chluese you better hang out a flag with a dragon or suthin' on it. Th' fact is,' sez I, 'th' way you put it we ain't none of us bright enuff over here to tell Chinese from catarrh!'"—Selected.

MADE THE PRAYER OF HIS LIFE

An old man in Georgia named Jack Baldwin, having lost his hat in an old dry well one day, hitched a rope to a snag and let himself down. A wicked wag named Neal came along just then, and quietly detaching a bell from Baldwin's old blind horse, approached the well, bell in hand, and began a ting-a-ling.

Jack thought the horse was coming, and said, "Hang the old blind horse; he's coming this way, sure, and he ain't got no more sense than to fall in on me—whoa, Ball!"

The sound came closer.

"Great Jerusalem! The old blind fool will be right on top of me in a minit—whoa, Ball! Whoa, Ball!"

Neal kicked a little dirt on Jack's head, and Jack began to pray:

"Oh, Lord, have mercy on—whoa, Ball!—a poor sinner; I'm gone now—whoa, Ball! Our Father, who art in—whoa, Ball!—hallowed be thy—gee, Ball! gee; what'll I do?—name. Now I lay me down to sl—gee, Ball! (Just then in fell more dirt.) Oh, Lord, if you ever intend to do anything for me—back, Ball! whoa!—thy kiugdom come—gee, Ball! Oh, Lord, you know I was baptized in Smith's mill-dam—whoa, Ball! Oh, up! Murder! Whoa!"

Neal could hold in no longer, and shouted a laugh which might have been heard two miles, which was about as far as Jack chased him when he got out.—Spectator.

THE SEXTON'S WIT

"An Irishman of the full blood cannot resist an opportunity for repartee, no matter how solemn the occasion or what his surroundings," said an English clergyman, a visitor in Washington, the other day, when the conversation turned on the funny experiences of clergymen connected with the church.

"I was assisting an old friend of mine, the rector of a church in Ireland, one Sunday, and before the service we were in the vestry-room putting on our robes, with the old sexton, a shriveled-up Irishman of the perfect type, assisting. My friend, who was somewhat old, was a little testy that morning, and somehow the sleeve of his surplice got mixed up. Notwithstanding the assiduous efforts of the old sexton to direct his arm to the right hole the two would not connect. Finally, losing patience, my friend said, sharply, 'Ach, the devil's in the thing!'

"The old sexton brightened up, and looking over at me with a twinkle in his eye, said, as quick as lightning, 'Not yit, your riverince.'

"It restored the good humor of the situation, and the vestment was properly adjusted."—Washington Post.

AT REST

In a cemetery near Portland, Maine, there are five tablets all alike except the inscriptions, which read:

"Anna, the first wife of John Brown."

"Mary, the second wife of John Brown."

"Jane, the third wife of John Brown."

"Clara, the fourth wife of John Brown."

"John Brown. At rest at last."

—Truth.

UNOBSERVING

Wiggles—"Some persons hold that there is no such thing as perfect happiness in this world."

Waggles—"I guess those people never watched a young woman in oblivious contemplation of that brand-new ring on the third finger of her left hand."—Boston Transcript.

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PATENT secured or money all returned. Exam. Free. COLLAMER & CO., 1040 F. St., Wash., D. C.

HOUSEHOLD

[CONTINUED FROM PAGE 11]

Mothers, I see you with your nursery-light,
Leading your babies, clothed in white,
To their sweet rest;
Christ, the good shepherd, leads mine to-
night,
And that is best.

I cannot help tears when I see them twine
Their fingers in yours, and their light curls
shine
On your warm breast;
But the Savior's is purer than mine,
He can love best.

You tremble each hour because your arms
Are weak, your heart is wrung with alarms
And sore oppress;
My darling is safe out of reach of harm,
And that is best.

You know over yours may hover even now
Pain and disease, whose fulfilling slow
Naught can arrest;
Mine in God's gardens run to and fro,
And that is best.

You know that of yours the feeblest one
And dearest may live long years alone,
Unloved, unblest;
Mine is cherished of saints around his throne,
And that is best.

You must dread for yours the crime that sears
Dark guilt, unwashed by repentant tears
And unconfessed;
Mine entered spotless on eternal years,
Oh, how much the best!

But grief is selfish, and I do not see
Always why I should thus stricken be
More than the rest;
But I know that as well for them, for me
God did the best.

—F. C. M.

WHEN AND HOW TO READ

FIRST I am going to tell you when
and how I read. Then I will tell
you of a better way in which you
may read.

Living alone, I spend much of my
time with books. I usually commence
the day's reading when I sit down to
my solitary breakfast. A book or mag-
azine lays open at the left side of my
plate, and I take my story, essay or a
few pages of history with my coffee,
toast and fruit. I read not only when
I eat, but also when I rest and when I
work.

The explanation of that last is simple.
I regularly keep up one subject of study.
Then I compile historical tales and
write nature-stories. These both re-
quire much reading, and reading with
note-book and pencil. I read for local
coloring for my stories. I spend much
time "looking up" various things. In
addition to this heavy reading I always
have something lighter under way. The
book I finished to-day was Henry Seton
Merriman's "The Sowers."

Busy wives and mothers don't read
this way. It is bread and butter with
me. It is also the work God gave me
in place of home ties like yours. Then,
it is a joy and a delight I cannot put
into words.

Read, though. Try to get a few mo-
ments each day. Go over the newspa-
pers, for you need to know something
of the progress of events both at home
and abroad. Give a little time to the
magazines. Read a good book as often
as possible. By a good book I do not
necessarily mean a dry, uninteresting
one. Neither do I mean a novel by the
"Duchess" or Bertha M. Clay. Read the
book—whether it be novel or history—
thoughtfully. It is well to look up
words that are new to you. Your ex-
perience may differ from mine, but
there are few weeks that I do not find
an entirely new word. If a book can
be discussed with another its help-
fulness is doubled.

One thing more! Read aloud in the
family. One of my earliest recollec-
tions, and one of my most pleasant
ones, is of the long winter evenings in
my home when father or mother read
aloud. In latter years the reading was
done by the children. When the changes
of life and grim death had scattered the
family circle I still read aloud to the
dear little invalid mother, and finished
the evening's simple pleasure with a
chapter from the Bible. Read to and
with your children. You can form their
tastes.

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By Albert J. Beveridge

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Poverty No Bar to a Public Career

By John J. Ingalls

Former United States Senator from Kansas

Getting and Keeping a Business Position

By Robert C. Ogden

New York Partner of John Wanamaker

The Making of a Railroad Man

By J. T. Harahan

General Manager of the Illinois
Central Railroad

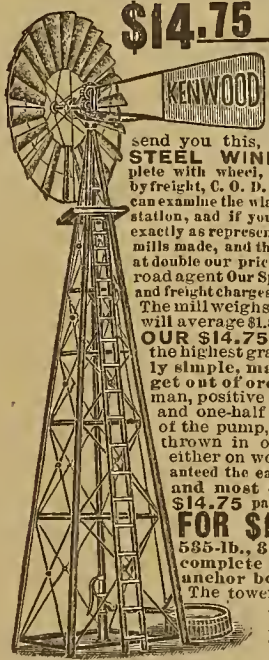


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The tower is strongly braced with
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post to post on every side
and on the bottom, the
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FARM SELECTIONS

THE LIBERAL CORN CROP BEGINNING TO MOVE

THE splendid corn crop is now being harvested rapidly, and definite estimates of the rate of the yield are available. The final returns by counties, sent in by "American Agriculturist's" correspondents, show a rate slightly below that of last year's big outturn, but the crop as a whole is nearly as heavy, owing to the increased acreage. The average yield for the crop of the United States is placed at 25.6 bushels an acre, against 26.4 bushels in 1899, and approximately 23 bushels in 1898. On the estimated acreage, slightly revised from our figures named in July, the total crop is 2,188,000,000 bushels, against 2,207,000,000 in 1899 and 1,868,000,000 in 1898.

Conditions at time of harvest are substantially as noted in "American Agriculturist's" September 15th report, which then anticipated the yield, naming the probable crop as 2,100,000,000 bushels. Farmers have complained some of the unsatisfactory weather, but October conditions were in the main favorable for harvesting. Owing to the general belief in reduced farm stocks of old corn the trade has shown no fear of the present good yield.

The following statement shows the estimated acreage of corn, yield an acre and total crop by states:

THE CORN CROP OF 1900 BY STATES

STATES	ACRES	PER ACRE	BUSHEL
New York....	494,000	30.9	15,264,600
Pennsylvania..	1,314,000	29.8	39,157,200
Texas.....	4,370,000	19.7	86,089,000
Arkansas.....	2,434,000	18.8	45,759,200
Tennessee....	3,268,000	18.0	58,824,000
West Virginia..	710,000	24.0	17,040,000
Kentucky.....	3,196,000	26.0	83,096,000
Ohio.....	3,415,000	36.4	124,306,000
Michigan.....	1,246,000	34.2	42,613,200
Indiana.....	4,371,000	35.8	156,481,800
Illinois.....	8,095,000	34.7	280,896,500
Wisconsin....	1,532,000	35.1	53,773,200
Minnesota....	1,109,000	35.4	39,258,600
Iowa.....	8,868,000	40.1	355,606,800
Missouri.....	6,630,000	27.7	183,651,000
Kansas.....	7,469,000	18.7	139,670,300
Nebraska.....	8,023,000	27.0	216,621,000
North Dakota..	15,000	18.9	283,500
South Dakota..	1,130,000	28.8	32,544,000
California.....	49,000	20.5	1,004,500
Oregon.....	18,000	25.9	466,200
Washington...	10,000	23.9	239,000
Other.....	17,510,000	12.3	215,373,000
Total.....	85,276,000	25.6	2,188,018,600
1899.....	83,677,000	26.4	2,207,473,000
1898.....	81,625,000	22.9	1,868,120,000
1897.....	82,720,000	22.0	1,823,343,000

—American Agriculturist.

ORANGE CROPS

Statistics of the coming orange crops in California and Florida are interesting. In Florida the railway men are figuring on a crop of 1,000,000 boxes, which is said to be the largest since the great freeze in 1895. The crop of 1894 was 6,000,000 boxes, so the state expects this year to attain one sixth of her old-time bumper crop. California has ceased to count her crop by boxes, and to compare Florida's crop with ours it may be estimated that it would make, say 2,750 car-loads. The Los Angeles "Herald" says that the California shipments for the crop year which closes this week will be about 17,800 car-loads, a gain of about seventy-eight per cent over the production of the preceding year, and about twenty-five per cent over the crop of two years ago. It is now very generally conceded that there will be a large increase in production during the coming year if everything moves well from this time on. The coming crop is now variously estimated at from 23,000 to 25,000 car-loads of oranges and lemons, with a growing disposition to accept the latter figure.—Pacific Rural Press.

BRITISH MUTTON

British consumers of mutton are increasing and their flocks decreasing. The latest returns show that the British flock is now considerably less than the average of such a decade as the seventies. It seems clear that Great Britain has reached the limit of its capacity to produce mutton.—National Stockman and Farmer.

THE GROUT BILL

The Grout Bill failed to pass at the last session of Congress, but December 6th is the date set for it to be taken up at the coming session. That it ought to become a law can hardly be questioned by any one who understands the needs of the dairy interests of this country.

So many mentions have been made in the agricultural and dairy papers of the importance of every dairyman writing the congressman from his own congressional district that it may seem unnecessary to refer to it in this letter; yet reference is so made, and because it is a matter of so much importance, and there is such an amount of capital pitted against the passage of the Grout Bill that no stone should be left unturned by its friends. There is no danger of doing too much to secure its passage, if done honestly and discreetly.

The friends of oleomargarine and the enemies of the Grout Bill and all other legislation having for its object the requirements that it and similar bogus products be sold for what they really are have the great advantage of great wealth to aid them in the support of their claims, both as regards their own product and as regards the character and object of the Grout Bill, especially the latter.

The efforts of the enemies of the Grout Bill have been expended in several directions, but the one quite as noticeable as any is in deceiving the general public as to its real nature. They would have the non-dairy public understand that the object of the Grout Bill is to tax oleomargarine ten cents a pound, and thereby drive it out of the market, to the great detriment of the poor man, who cannot afford to buy genuine butter.

Now, the facts are—as readers of agricultural papers know—that if oleomargarine is colored in a way to resemble pure butter the tax is to be ten cents a pound. But if not so colored it is to be one fourth of a cent a pound, as remembered. If the makers of oleomargarine want to help the poor man, let them not only put their product on the market for what it is, but also make it impossible for the retailer to do otherwise.

No one believes that the average maker of oleomargarine will violate the present law by selling oleomargarine for anything other than what it is. But the trouble comes later when the retailer palms it off for genuine butter, which he can easily do because of its close resemblance to that product of the dairy. When the trouble is corrected the "poor man," for whose welfare the friends of oleomargarine evince such great anxiety, will be able to buy that product several cents lower a pound than he has thus far been obliged to pay, and then he will not buy it unless he prefers it to butter, because the latter will cost more.—Boston Globe.

COMPENSATION

I do not pretend to understand what Emerson is driving at part of the time in his "Essays," and thoroughly appreciate the feelings of the man who originated the story that when that great philosopher was viewing the Great Sphinx of Egypt it deliberately winked at him, recognizing that they were two of a kind. But his "Essays" are helpful, for all that, if one believes only the part that he should believe. After reading the one on "Compensation" the other day I turned back and accepted fully this statement: "For everything you have missed you have gained something else; and for everything you gain you lose something." That made the world look pretty smooth. But it is poor philosophy that will not work out in the small details of life. Within twenty-four hours I have found that the "white grub" had literally eaten up two acres of my wheat. It was old meadow-land. That ground has produced more meat in the form of grubs than it could have done in pork or beef. Where is the compensation? Teaching dependence? The drought did that. What are white grubs good for, anyway? They do hundreds of dollars damage here every year, injuring potatoes, wheat and meadows.—Alva Agee, in National Stockman and Farmer.

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It gives us great pleasure to announce the discovery of a positive cure for Asthma, in the wonderful Kola Plant, a new botanic product found on the Congo River, West Africa. The cures wrought by it in the worst cases are really marvelous. Sufferers of twenty to fifty years' standing have been at once restored to health by the Kola Plant. Among others, many ministers of the gospel testify to its wonderful powers. Rev. J. L. Combs, of Martinsburg, W. Va., was perhaps the worst case, and was cured by the Kola Plant after fifty years' suffering. Mr. Alfred C. Lewis, Washington, D. C., editor of the Farmer's Magazine, gives similar testimony, as do many others. To prove to you beyond doubt its wonderful curative power, the Kola Importing Co., No. 1164 Broadway, New York, will send a large case of the Kola Compound free by mail to every reader of the FARM AND FIRESIDE who suffers from any form of Asthma. They only ask in return that when cured yourself you will tell your neighbors about it. You should surely try it, as it costs you nothing.

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FARM SELECTIONS

EXPANSION AND RICE CULTURE

SINCE the acquisition of the Philippines and the demand for an open-door policy in China the agricultural circles of the United States have manifested much interest in the commercial possibilities of the cultivation of rice.

The present statistics on this subject are unsatisfactory but interesting. The world's consumption of rice is enormous. It constitutes the principal food-stuff of China and Japan, and one of the principal cereal foods of India, Egypt, Siam and the Philippines, and the combined population of these countries is more than half the total population of the globe.

Here is a magnificent market, and so far as the United States is concerned practically an unentered field. We now produce about seventy thousand tons annually and consume twice that amount. Whether we can profitably produce the whole domestic supply necessary and force an entrance into Eastern markets depends upon the possibility of employing machine methods and Western methods of production to a degree sufficient to offset the lower cost of labor in the Orient. Toward the end of the last century this was done for cotton cloth; the first quarter of the next century may see it done for rice.

In the United States labor costs more than in the East, but it is also more productive. The Department of Agriculture estimates that the American laborer in southwestern Louisiana or Texas can farm about sixteen times as much rice-land as the laborer of Spain or Italy, twenty times as much as the Egyptian laborer, twenty-five times as much as the East-Indian, and thirty times as much as the Chinese. Farm labor thus costs less for a given yield in America than in any other rice-growing country.

American labor is more productive because it works with American machinery. Instead of a sickle the farmer frequently cuts the grain with a reaping-machine; instead of flailing or treading it out he threshes it with a steam-thresher; instead of pounding it in a mortar with a pestle he hulls and cleans it in a modern mill, where a few men and a few machines clean and polish as much rice in a day as five thousand men could do with the primitive tub and pounder still used in the East.

Rice is peculiarly susceptible to cultivation on a large scale. To raise it successfully the farmer must have at his command an adequate supply of water of uniform temperature and under such control that it can be used in the right quantities at the right times. These conditions are best secured by powerful pumping machinery and extensive irrigation-works, and the result is systematized production on a large scale. In such industries American people lead.

There are several other reasons for believing that we are to become an important factor in the world's production of rice. Hitherto we have been cultivating a very expensive and undesirable variety, but recently the Department of Agriculture imported a large supply of Japan, or Kiusiu, rice, which yields about one fourth more to the acre and loses about one fourth less in milling than Honduras rice, the usual American variety.

Moreover, it looks as if rice-straw will become a valuable commercial product. The price of paper, particularly of the grade used by newspapers, has of late been steadily rising. To meet the immense demand for cheap paper extensive experiments have been conducted, with the object of inventing a cheaper method of manufacturing paper from rice-straw. These experiments are said to promise success.

All these facts point to a cheaper and larger production in the South and in other suitable regions. From 1879 to 1889 the yield an acre in the United States increased twenty-six per cent. In recent years a number of Northern farmers have undertaken the cultivation of rice with modern machinery in Louisiana, and their success has stimulated the industry in Texas and elsewhere.—Department of Interior.

FALL CALVES

The only material point of difference between rearing fall calves and spring calves is due to weather and character of food. Winter weather is less favorable to that outdoor exercise so conducive to health and growth. During the greater part of the winter months, on farms north of the Ohio, calves have to be kept under cover. This entails considerably more care and labor than is required for calves in the spring. Nevertheless, there are advantages in the management of fall calves that make up for this.

When a calf is dropped it is natural and motherly for the dam to lick it; if she does not do so readily a little salt sprinkled on the calf may induce her to do her duty. If she still persists, then the attendant should wipe the calf off dry with straw or a clean cloth and place it in a dry place. The calf should be left with the dam until she ceases to give colostrum. The colostrum is nature's medicine for setting the calf's bowels in healthy action.

Care must be taken that the calf sucks at least four times a day. At the expiration of a week or ten days the calf should be separated from its dam and given quarters of its own. These quarters must be clean and dry. At this time the calf should be taught to drink, getting whole milk. At the end of three weeks a little skim-milk may be added to the whole milk. The skim-milk should be reinforced by something to supply the place of the cream-fat it has lost. Linseed-meal is perhaps the best for quite young calves. The rate of addition is about two per cent—two pounds of linseed-meal cooked to a jelly to each one hundred pounds of milk. Corn-meal and ground oats may also be used with satisfaction. The skim-milk should always be fed warm and sweet. Sour milk is so much poison.

When the calf begins to chew its cud it has developed its fourth stomach, and may be fed small portions of solid food. This should be selected and regulated to secure healthful growth without laying on fat. Wherever a Jersey herd is kept there should be a calf-shed large enough for all the calves. Each calf should have a separate stallion, to protect it from interference of others and keep it from wasting its food. Calves should be gentled from birth and accustomed to being handled. Treated this way heifers do not need to be broken in to milk; they come to it naturally.—A. Baker, in Jersey Bulletin.

COMMERCE FOLLOWING ANNEXATION

The growth of our commerce with the Hawaiian Islands in the years 1899 and 1900 has been phenomenal. In 1890 the exports of the United States to the Hawaiian Islands were \$4,711,417, and in 1897 were \$4,690,075, showing no growth from 1890 to 1897. In 1890 the imports into the United States from the Hawaiian Islands were \$12,312,098, and in 1897 were \$13,687,799.

The treaty of annexation was signed at Washington June 16, 1897, so that all the commerce of the fiscal year 1898 felt the effect of that step. In that year the exports of the United States to the Hawaiian Islands were \$3,907,155, an increase of twenty-seven per cent over 1897, when they amounted to \$4,690,075. The treaty was ratified and sovereignty over the islands formally transferred to the United States on August 12, 1898, thus bringing practically all of the fiscal year 1899 within the period following the complete annexation. The exports to the Hawaiian Islands in the fiscal year 1899 amounted to \$9,305,470, an increase of over fifty per cent. On the import side the year 1898 showed an increase of three and one-half millions over 1897, and the year 1900 showed another increase of three and one-half millions over 1898 and 1899.—Omaha Bee.

RURAL TELEPHONES

Just figure on the cost of a telephone line extending from your farm to town, talk it over with those along the line who would be glad to go in with you, and you will be surprised that you haven't had a phone long ago. In many cases the poles and labor can be furnished without actual outlay.—Farm Journal.



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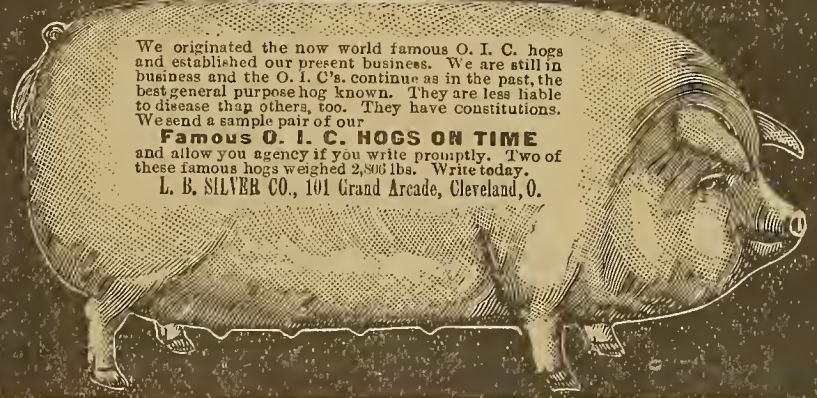
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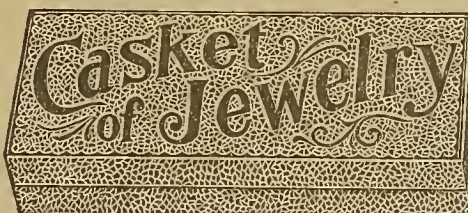
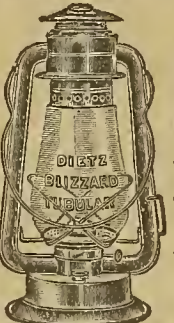
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FREE This beautiful Jewel Casket is silk lined, has a hinged cover and contains all of the following pieces of jewelry: Gold Watch Chain and Charm, Bracelet and Locket, 4 Scarf Pins, (Diamond, Turquoise, Ruby, Emerald), Genuine Electric Diamond Ring, Plain Gold Ring, Pair Cuff Buttons, 5 Stick Pins (Fly, Butterfly, Horse-shoe, Marlowe, 3 Hearts), Enamelled Brooch, Trilby Heart, Emerald Belt Pin and 3 Beauty Pins. This jewelry is fine gold plated, and the stones are exquisite imitations of the precious gems they represent. You can get this beautiful Jewel Casket with the twenty-two pieces of fine jewelry absolutely free for selling only eight boxes of our Once! Cures Cold in One Day! Believes Headache at once! Write to-day, and we will send you the tablets by mail postpaid. When sold send us the money, \$2.00, and we will send you this beautiful premium, exactly as described same day money is received. If you do not sell all of the tablets, we will send you two pieces of jewelry for each box sold. This is a grand opportunity to get a charming assortment of elegant jewelry for a very little work. Write to-day to **NATIONAL MEDICINE CO., Lock Box 17 M, 1010 Chapel Street, New Haven, Conn.**

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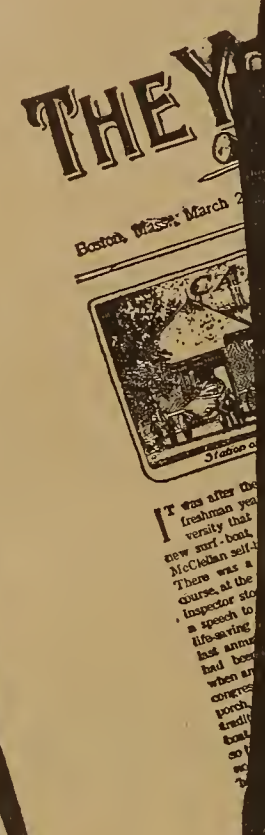
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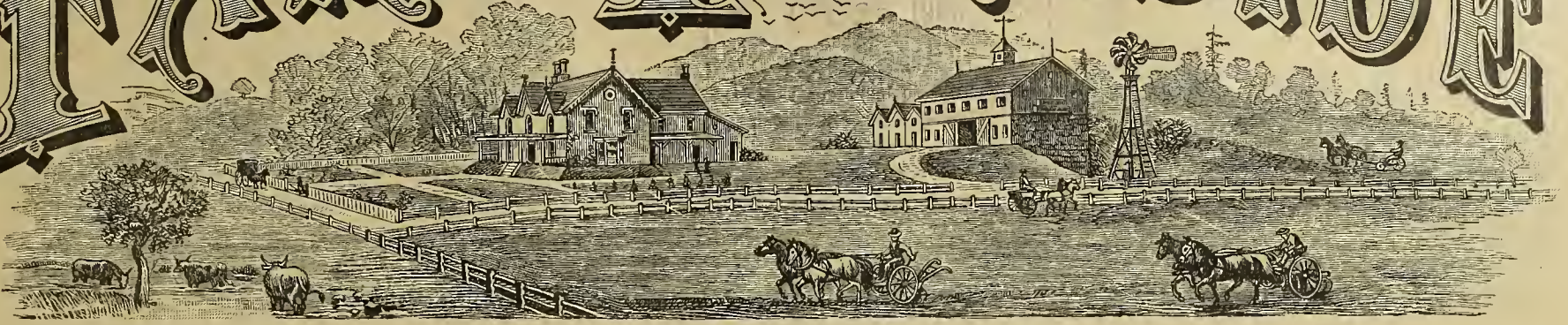
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FARM & FIRESIDE.



Vol. XXIV. No. 6

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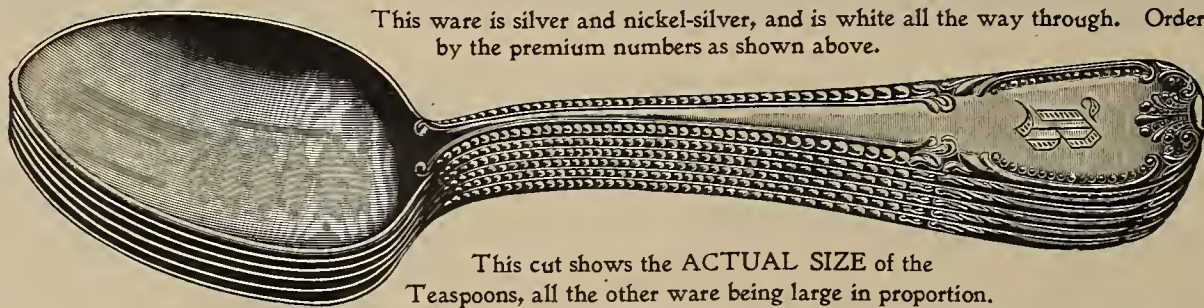


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Address FARM AND FIRESIDE, Springfield, Ohio

A RACE OF FARMERS

By Edward A. Steiner

FROM the Ural Mountains deep into the heart of Europe, the Balkan Peninsula, as far as the blue Adriatic, nearly the whole eastern portion of Europe is inhabited by a race which is composed of a mixture of varying types and petty nationalities, called Slavs, all of them more or less engaged in agriculture. There are not far from one hundred millions of these people, of whom two thirds make up the Russian Empire; and the others are Poles, Czechs, Serbians, Bulgarians, Montenegrins, etc. They differ one from the other in dress and speech, but have certain common characteristics. They nearly all live in villages, cities and isolated farms being, comparatively speaking, very rare. The villages all look alike. There is always one street, and just one, in the village; one mud-house leans against the other, one thatched roof overlaps the other, and there is never more than one fire at a time in a village like this; for generally the whole business burns down at once. The barns, called stodoly, are generally built together a short distance from the village. The church occupies the center of the village, and near by is a mud-pond, where geese, pigs and babies take their daily swim. Put into some convenient place a pump, tie some ox-teams to it, place in the foreground clouds of dust or a sea of mud, and you have a fair picture of a Slavic village.

Of course, they differ in degrees of ugliness, the Russian village taking the first prize for unadorned homeliness, as there is no sign of beauty—not even a primitive attempt at decoration anywhere. Among the Slovaks in Hungary and among the neighboring tribes there is an attempt at art; crudely painted houses are the rule, and somewhere about them there will be an indication of decoration, but it requires a vivid imagination to find out just what it is.

Little flower-gardens near or around the houses are seldom or never seen in Russia, but are common among the Czechs and other western Slavs. The interior of the house differs among them as to size and arrangement. The Russian house has two rooms, separated by the main entrance. One is called the cold room and the other the hot room. The hot, or winter, room has as its chief possession a brick bake, cook and heating stove or oven, the top of which is the bedstead in the winter-time; and a very comfortable place it is. The cleanliness in these Slavic homes is also of varied degrees, and is mostly conspicuous by its absence. Dirt, I am sorry to say, is almost everywhere in evidence, and certain insects which would annoy us dreadfully exist in these rooms in uncountable numbers, but are treated with silent contempt, which does not tend to reduce their numbers.

The Slavic tribes differ in their costumes, but nearly all of them have retained the sheepskin coat, which they wear summer and winter. The wool is turned inside. The skin is often colored red, and the legs of the sheep hang over the shoulders. Both men and women wear this coat; but, of course, the woman's coat is decorated in fantastic ways and costs a great deal more money. The rest of the man's attire consists of linen trousers and shirt—home-made, from the tough fiber to the coarse stitching. A cap is also worn, and in Russia is generally of fur. There are numberless varieties of this dress, but in each village all dress alike, differing only in the fineness of the material used.

How do the women dress? Can a man ever describe a woman's dress? And can any mortal describe the Slavic woman's dress, where in nearly every village they have a peculiar style? And

oh, what styles! Color in everything—red, yellow, silver and gold, laces and embroideries and what-not, costing sometimes nearly two hundred dollars. But, of course, they do not get a new dress every year—just once in a lifetime, or, if they are really good, maybe two.

The Slavic farmer lives simple enough. His food consists largely of a vegetable diet, and meat on the table is the sign of a holiday, a wedding or of a fortunate excursion into a neighbor's chicken-coop or pig-sty. Among one large tribe they have only one meal a day—usually at noon. It is cooked in the morning, and kept warm under the ashes or under the feather-bed until it is time to eat it.

The main staples of diet among all are potatoes, black, sour rye-bread, cabbage, which is used in soups and cakes, kascha, which is a gruel, and finally barshtsh, which is a concoction made of red beets, and is not half so bad as it looks.

The Slav not only eats, but he also drinks, and he is generally addicted to the use of polenka, or vodka, a crude alcohol made out of rye, or more often from potatoes. Its use does not tend to make the Slav an agreeable husband or citizen. He drinks it ten times a day, and not out of cups, but glasses. The samovar (tea-kettle) is found everywhere—in the house of princes as well as of peasants—and I know not a single hut in all Russia where the samovar, a big brass tea-kettle, is not found.

One of the marked characteristics of the Slav is his deep religious feeling. If you wander through Moscow you will see at every step evidences of this by the many churches, chapels and wayside icons, before which the faithful cross themselves or lie prostrate in the dust. Everywhere the Russian manifests his deep allegiance to the church, and every action of his life is in some way influenced by its teaching. He obeys implicitly all its rules, especially in regard to the many fast or feast days. He venerates the

churches and cloisters, has implicit faith in the intercession of the saints, and every year out of every village go forth pious pilgrims over barren wastes and through dense forests to some sacred tomb in some far-away cloister. The height of ambition of every pious mujik is to make a pilgrimage to Jerusalem, and a whole lifetime is spent in self-denying struggle to accumulate money enough for that purpose.



A RUSSIAN PILGRIM

Agricultural pursuits are often interfered with by the many holy days and holy weeks; and, on the whole, it may be said that the Slav's progress is retarded rather than helped by his religious life.

Education among them is upon a very low plane, though as a rule they are intelligent, if not brilliant. The church, with a host of uneducated clergy, does nothing, and can do nothing, for these

stagnating millions. The proportion of illiterates is no doubt greater among the Slavs than among other European people. Much has been written lately about the conflict between the Slav and the Anglo-Saxon. If the conflict is to be a purely physical one—brute force meeting brute force—we might fear; but knowing the Slav as I do, I can say that nothing is to be feared from him even from the physical side. While he is an obedient soldier, he lacks courage on the whole. He is not a fighter, but a peaceful farmer; not a farmer in the Anglo-Saxon sense, but just a plodder whose physical powers are not governed by a strong will and noble passions. Mentally he is as far behind the Anglo-Saxon as the Middle Ages are behind this century. He has, as a whole, remained untouched by modern-thought movements, and if mind enters into the struggle of nations he is simply out of the race.

The Slav is to-day the most primitive kind of farmer in methods and in spirit. His farm consists solely of isolated patches of ground scattered around his village, and he must travel miles to reach one field after the other. In Russia, among the peasant farmers there is no sign of improved agricultural implements, and no desire and no means to purchase them. The government not only does not aid, but generally hampers him in his development. He is good only for paying taxes, and in whole Russian provinces I have not seen one effort made to aid him in the slightest way. He is, as a rule, averse to physical exertion, and that is disastrous to good farming. The word "hustle" is not in his dictionary of life, but the word "nitzhevoy," which means "it matters not," is. To come from a Slavic village into a German one is like stepping from a wilderness into a paradise; and the traveler from Russia into Germany does not have to be told when he crosses the border! He sees it at once.

The interior of Russia is one vast stretch of melancholia, and a Dakota prairie is beautiful compared with the stretches of land from Moscow to Warsaw or to St. Petersburg. It is unrelieved wilderness, and during days and days I have seen not so much as a [CONCLUDED ON PAGE 8 OF THIS ISSUE]



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THE Ninth National Irrigation Congress was recently held in Chicago. In an address President Thomas Walsh said:

"A point which should be emphasized in connection with water storage and irrigation is the fact that to a certain extent the interests of agriculture and mining in the West are closely interwoven. With the development of irrigation population is increased and the cost of living reduced. With reduced cost it is possible to work the lower-grade ores, which have been neglected owing to the sparsely settled condition of the country and the great cost of transportation and subsistence. On the other hand, agriculture is greatly benefited by having at the mines a good market for all the products of the soil. By the establishment of the mineral industries on a paying basis the prosperity of the farmer of the country is assured. Thus, with the growth of one comes the increase of the other."

Speaking on "A Nation's Opportunity" Mr. Alexander H. Revell said:

"America," said Emerson, "is another name for opportunity." Opportunities come to nations as well as to individuals. Will the United States avail herself of one of the grandest opportunities ever given to a nation?

"The advantages to the commercial and manufacturing interests of the country from the rapid settlement of our arid regions are manifest. As a matter of course, new communities in this new country would be customers to consume the products of our Eastern factories. Through their local dealers these new communities would purchase from our Eastern wholesale merchants, and all business would be stimulated by this increased interstate commerce."

"There is a vast number of industrious people of very small means in our cities, each of whom would be glad of

the opportunity to get a piece of land to cultivate himself, and from which he could make a living. There is no reason why little farms, such as those on which the rural people of European countries are so contented, should not be reproduced in irrigated regions of the West. Where irrigation is practiced small farms are the rule, and from three to five or ten acres of land well cultivated will support a family in comfort. When it shall be seen that a man can in this way practically become independent, life in the squalid quarters, in crime and disease ridden districts of great cities will not be so alluring.

"If these government lands were provided with water for irrigation many of the poor could get five, ten, fifteen or twenty acres of land and thus become independent. The land would be very cheap, and they could cultivate it and put it in shape to produce a living for themselves with their own labor. This is practicable. In France and Belgium, more especially, the people who live on these small farms are very prosperous. They make a living, many of them save money, and if we could settle the great area of irrigable lands in the West, especially in those parts of the country where vegetables and fruit can be grown, as they can in Arizona, Colorado and Idaho, the population which could occupy and farm these lands would be enormous.

"Private enterprises can never adequately solve this problem and that of the preservation of the forests. The task is a huge one. It breaks through state and sectional boundaries and demands the attention of a broad statesmanship, profoundly convinced that in every nation those who are not prosperous and contented will greatly outnumber those who are, and that ultimate success comes only to that nation where the effort and strife have been to make the largest number possible of its population contented and happy.

"Will the opportunity and the burden be accepted by the nation as a nation? Or will the great work be divided among a thousand money-making land and water companies, aiming to make vast profit, to be taken from the poor, whose hopes are for freedom and independence, but who would be mortgaged, bound hand and foot, for a hundred years? We find the answer springing from millions of true hearts from all parts of the country—the nation and not the individual will do it."

A letter from Secretary Wilson on "Forestry and Irrigation" read, in part, as follows:

"The water problem, like the forest problem, is essentially and primarily one of conservation and use. The waste of water in floods and the waste of forests by fire are parallel losses, each utterly hostile to the best interests both of the farmer and of the nation at large, and each preventable by perfectly well-known means. Enlightened public opinion and the use of expert skill are the two forces which are indispensable if we are to 'save the forests and store the floods,' in accordance with the admirable motto of your Congress. The creation of public sentiment will be immensely forwarded by your meetings, and you may safely look to the national government for some part at least of the trained skill to study the water problems which confront the irrigator, and to make the forests of the Great West, and of the East as well, yield their products year after year and decade after decade in unbroken abundance."

IN HIS annual message to Congress President McKinley, after giving a concise history of the troubles in China, says:

"The policy of the United States through all this trying period was clearly announced and scrupulously carried out. A circular note to the powers, dated July 3d, proclaimed our attitude. Treating the condition in the north as one of virtual anarchy, in which the great provinces of the

south and southeast had no share, we regarded the local authorities in the latter quarters as representing the Chinese people, with whom we sought to remain in peace and friendship. Our declared aims involved no war against the Chinese nation. We adhered to the legitimate office of rescuing the imperiled legation, obtaining redress for wrongs already suffered, securing wherever possible safety of American life and property, and preventing a spread of the disorders or their recurrence.

"As was then said, 'the policy of the United States is to seek a solution which may bring about permanent safety and peace to China, preserve Chinese territorial and administrative entity, protect all rights guaranteed to friendly powers by treaty and international law, and safeguard for the world the principle of equal and impartial trade with all parts of the Chinese Empire.'

"Faithful to these professions, which, as it has proved, reflected the views and purposes of the other co-operating governments, all our efforts have been directed toward ending the anomalous situation in China by negotiations for a settlement at the earliest possible moment. As soon as the sacred duty of relieving our legation and its dependents was completed we withdrew from active hostilities, leaving our legation under an adequate guard in Peking as a channel of negotiation and settlement—a course adopted by others of the interested powers. Overtures of the empowered representatives of the Chinese Emperor have been considerably entertained.

"General bases of negotiations formulated by the government of the French Republic have been accepted, with certain reservations as to details, made necessary by our own circumstances, but, like similar reservations by other powers, are open to discussion in the progress of negotiations. 'The disposition of the Emperor's government to admit liability for wrong done to foreign governments and their nationals, and to act upon such additional designation of the guilty persons as the foreign ministers at Peking may be in a position to make, give hope of a complete settlement of all questions involved, assuring foreign rights of residence and intercourse on terms of equality for all the world.'

"The matter of indemnity for our wronged citizens is a matter of grave concern. Measured in money alone a sufficient reparation may prove to be beyond the ability of China to meet. All the powers concur in emphatic disclaimers of any purpose of aggrandizement through the dismemberment of the Empire. I am disposed to think that due compensation may be made in part by increased guarantees of security for foreign rights and immunities, and, most important of all, by the opening of China to the equal commerce of the world. These views have been, and will be, earnestly advocated by representatives of our government."

IN HIS report upon the work of the Department of Agriculture for the year ended June 30, 1900, Secretary Wilson says:

"While the wonderful growth attending the exportation of domestic manufactures has, it is true, somewhat reduced the relative proportion of farm products comprised in our total exports, the increase in our agricultural exports during the period covered by the present administration has nevertheless been most remarkable.

"Our total sales of domestic farm products to foreign countries during the four fiscal years 1897-1900 aggregated the enormous sum of \$3,186,000,000, or close to \$800,000,000 in excess of the export value for the preceding four-year period. In other words, we received on an average during 1897-1900 for products of domestic agriculture marketed abroad nearly \$200,000,000 a year above the annual amount paid us for such products during 1893-1896.

"The agricultural exports of the

United States for the fiscal year ended June 30, 1900, amounted in value to \$844,000,000, exceeding all other records except the phenomenal one of 1898, when a valuation of \$859,000,000 was attained. During the past four years, 1897-1900, the farm produce exported had an average annual value of \$797,000,000, as compared with only \$598,000,000 for the prior four-year period.

"One of the most striking features of our foreign trade during the last few years has been the rapid growth of exports to the Orient. In 1896, five years ago, our total shipments of domestic merchandise to Asia and Oceania were valued at \$43,000,000, and these exports included agricultural products to the value of \$9,700,000. During the following year, 1897, the total export value rose to \$62,000,000, while the amount received for products of the farm increased to \$15,000,000. Each succeeding year in like manner has witnessed further striking gains, until in 1900 our export trade with the Orient exhibited an annual value of \$107,000,000, including shipments of farm produce worth \$30,000,000. The growth of our agricultural exports to that quarter of the globe—from \$9,700,000 in 1896 to \$30,000,000 in 1900—was especially marked, showing a gain that amounted in the brief space of four years to over two hundred per cent.

"One of the most striking examples of increase among our agricultural exports to the Orient is afforded by the great Southern staple—cotton. Of this product we shipped across the Pacific in 1896 only 38,000 bales, valued at \$1,500,000, whereas our exports to the same destination in 1900 were nearly ten times as large, amounting to 325,000 bales, valued at over \$13,000,000.

"It is interesting to note that with the increased shipments of the raw fiber there was also a marked growth in the exports of cotton manufactures. During 1900 our cotton manufacturers shipped over \$12,000,000 worth of goods to the Orient, as against only \$5,500,000 worth during 1896, five years ago. The cotton fabrics we marketed in the Orient during the past fiscal year formed in value more than fifty per cent of our total exports of these goods to all destinations.

"After cotton the principal article among our agricultural exports to the Orient is wheat-flour. The trade in this product has been nearly doubled since the year 1896. In that year the rels, worth \$3,600,000, whereas in 1900 shipments amounted to 1,211,000 barrels, reached as high as 2,378,000 barrels, worth over \$7,000,000.

"During the past fiscal year the new island dependencies of the United States—Cuba, Porto Rico, the Hawaiian Islands and the Philippines—furnished a market for more than \$45,000,000 worth of our domestic products, manufactured and agricultural. Five years ago these same islands purchased from us only \$13,000,000 worth of goods. In the four years subsequent to 1896 our export trade with the islands mentioned has been more than trebled in value.

"A comparison of our total domestic exports for the years 1896 and 1900 shows that the value increased in the case of Cuba from \$7,300,000 to \$25,000,000; Porto Rico from \$2,100,000 to \$4,300,000; the Hawaiian Islands from \$3,900,000 to \$13,000,000, and the Philippines from less than \$200,000 to over \$2,600,000.

"The growth of our agricultural exports to the new dependencies during these years was proportionately as great as that recorded for our total exports of domestic merchandise. During the fiscal year 1900 we sold to the various islands over \$20,000,000 worth of farm produce, as compared with only \$6,300,000 worth during 1896.

"With Cuba our agricultural export trade in the period under consideration increased from \$4,000,000 to \$14,000,000; with Porto Rico from \$1,200,000 to \$2,300,000; with the Hawaiian Islands from \$1,100,000 to \$2,800,000, and with the Philippines from less than \$23,000 to \$1,700,000."

ABOUT RURAL AFFAIRS

Apples a Paying Crop We have to admit that apples have paid us fairly well this year. The loss of the fruit in the earlier season was enormous. That Texas tornado reduced the crop from one third to one half, and later storms reduced it still more; but I believe that all this loss was a gain to the grower in the end, and would have been a greater gain if most growers had not been so anxious to put all that trash from under the trees on the market. I have still many hundreds of bushels of Greenings and Baldwins on the ground under the trees where they fell, most of them rotting or otherwise spoiled for any use except cider. This loss made the good winter fruit rather scarce, and for that reason eagerly sought and worth a fairly good price. I could sell ordinary winter fruit of mixed varieties at \$1.75 and upward a barrel by the car-load to-day if I only had them. One thing is sure enough; namely, that the country will not have an oversupply of apples this winter. Apples are practically out of the hands of the growers, and the big storage-houses are not full, by any means. A few days ago I saw an article in a Buffalo daily felling in big head-lines of the enormous crop of apples "now hanging on the trees ready to be gathered"—"the record-breaker of the century," etc. What fearful nonsense this is! Here we have only a fraction of the crop we had in the year 1896, and I am sure the whole apple output this year is much below that of that disastrous apple year. But on the whole we have more confidence now in the future of the apple-growing business, and in its profitableness, than we possessed for many years before, and we now say that "apples still pay."

Boiled Cider The "Country Gentleman," commenting on an item found in a New Hampshire local paper, says: "Boiled cider is always a staple, worth about one dollar a gallon. Now a forty-five-gallon cask of sweet cider, worth two dollars, will yield fifteen dollars. Deducting the price of cheap wood burned in the process, and other expenses, leaves at least a dozen dollars net on each cask of sweet cider." The suggestion is not bad, but unfortunately comes a little late. Boiled cider will keep almost for an indefinite length of time, and surely it will sell if properly put up and offered for sale. I might have made thirty or forty casks of cider without making more than half an effort, and with a good outfit—evaporating-pans, etc.—could have produced several hundred dollars' worth of boiled cider. It takes but very little time to make it, and far less room to store it than vinegar, and brings far more money when sold. The idea will keep, however, until the next apple year.

Best Poultry Food E. R., a reader living in Wisconsin, gives his formula for the best poultry food in response to the offer of a five-dollar reward mentioned by me in an earlier issue of the FARM AND FIRESIDE. He says: "My formula is as follows: Oats sufficient for feed in the morning brought to boiling-heat at night and allowed to stand until morning. Feed no more than what will be eaten clean. At noon give a meal of cut clover, with plenty of cut green bone, not quite enough in all for a full meal. At night give all the whole wheat that the fowls will eat up clean. Keep the house warm enough so water will not freeze inside even with a full supply of fresh air. Give plenty of pure water to drink, and have the chill taken off this in the morning in freezing weather. The oats and wheat may be thrown among leaves or chaff, to make the hens scratch for a living." This formula, I think, is pretty good, although it is hardly what the people who offer the reward would want. What they are after is a formula for a mixture of ground grains, stimulating herbs, etc., that they can offer

at a good price and a big profit to themselves. During cold weather I think I would substitute corn quite largely for the wheat in the evening meal, for the purpose of supplying plenty of heating material. On the whole, however, I consider wheat an entirely safe feed for poultry, and little chicks will thrive and grow and older fowls do quite well even on an almost exclusive wheat diet during the larger portion of the year.

Roots Versus Water I have once more stored up a good supply of beets, turnips, etc., in my cellar, and shall feed them liberally to the cattle all winter long. A writer in one of my exchanges tells of a neighbor who fed to his cow a bushel of turnips daily; and although this cow was on a hay diet besides, he said she never drank any water in three weeks, although it was offered to her daily. I fed to my cows about a bushel of mangels each a day last winter, and I often wondered what small quantity of water they would drink, although yielding a good lot of milk right along. I do believe that root crops are the very best form in which we can supply our cattle with water during the cold season. It does not chill them in that form all at once, or make them shiver for a long time, as the cold water from well or spring so often does. And what water I do give to my milk-cows is usually offered in the way of warmed slops. This makes all the world of difference in the yield of milk. As usual, I also gather the old kohlrabi-bulbs left over from the later crops, as they make very serviceable green feed during the winter, and are far too good to be allowed to go to waste in the garden. An occasional feed of apples will also come handy for the same purpose. I like the kohlrabi and apples especially as an occasional feed for my Belgian hares, the mangels being almost too succulent for them unless fed very sparingly.

Preserving Fruits in Lime Some years ago the idea was suggested of packing fruits, tomatoes, etc., in dry lime for winter keeping, and various experimenters reported complete success in keeping such products for a long time without decay. I am a firm believer in the usefulness of this method, and only wonder that it seems to be so little known or practiced. I seldom see even a reference to it in our agricultural papers, and probably for that reason even those who know of it fail to think of it in time to make use of it. We need constant reminders of these things, and look to our agricultural papers to suggest the proper thing at the proper time. The object I have in view in presenting this subject at this time is to induce some of my readers who may have made some experiments with lime-packing as a preserving device to give us a full report about the outcome. I am very sorry now that I neglected to lay down some tomatoes in this fashion while I had so many and so fine ones. Indeed, I might have had them fresh and nice right along for a long time yet. The lime powder does not in any way injure or mar them. It comes off easily enough by simply rubbing them.

Information About Fertilizers A reader in Georgia asks me to "treat him as I did E. G. B., of Maine; namely, send him a copy of my Practical Farm Chemistry." Rather than treat the whole field of the chemistry of manures in a private letter I would surely prefer to send to any reader of the FARM AND FIRESIDE who does not know the rudiments of this science, and wishes to study them, a copy of that work of mine, free of charge. But the postage on it is four cents, and I should not be asked to pay that, too, in addition to making a present of the book, the regular retail selling price of which is 50 cents. This is meant as a hint for further applicants.

Top Dressing Grass-lands The Rhode Island Experiment Station, Kingston (as reported in Bulletin No. 71), has made some experiments in top dressing grass-lands with nitrate of soda and given quantities of acid phosphate and potash, and comes to the conclusion that the increase of hay crop was worth more than double the amount of money, in most cases, spent for the fertilizers. The season was dry, and probably even better returns would have been secured in a wet season. On the other hand, hay is worth more this year than in an average season. It will be well for all of us, however, to give this matter of top dressing grass-lands for profit some earnest consideration. Send for a bulletin, anyway, and see how the Rhode Island Experiment Station came out. T. GREINER.

SALIENT FARM NOTES

Roads Just now the roads in this locality are about as bad as they ever get in early winter. The mud and slush is from four inches to one foot in depth, while the ruts are away down. This condition brings the matter of "good roads" home to farmers, and some of the more enterprising—those who believe that good roads the year around will benefit them materially—are again agitating the matter in a lively manner. But the opposition is large and powerful, and the good-roads advocates find themselves still largely in the minority. If any one wishes to make himself thoroughly unpopular and to be regarded as a dangerous character all he has to do in many rural districts is to proclaim himself an advocate of hard roads. His best friends will pity him as one a little "off" in the upper story, while the rest of the community will "lay for him;" and if he should announce himself a candidate for any office, they will see that he is promptly and instantly squelched.

In this matter argument is of little use. The man who is opposed to improved roads is determined to remain so, and argument seems only to make him more obstinate. I have heard men who did not own a hundred dollars' worth of property declaim against proposed or suggested improvements of the roads, as though the entire cost would fall on them alone. I have seen some of these same men captured, boots and all, in fifteen minutes by a tactful road officer, who quietly drew them aside and offered to employ them at good wages in making the said improvement. Proper "manipulation" will work wonders with such men. But the land-owner is more difficult to manage. He knows that he will have to help pay for the improvements, and often he will be found kicking even while he is enjoying the benefits of the improvement. At our farmers' institute this matter has been discussed several times, and the discussion invariably waxed acrimonious, and a majority of the audience are in full sympathy with those who oppose good roads.

The most entertaining and effective advocate of good roads I ever heard was a quiet little fellow who discussed both sides of the question. He first began by denouncing extravagant expenditures and riding rough-shod over the farmers, and the kickers were with him at once. He then argued that the town was benefited equally with the country by hard roads, and therefore the expense should be equally shared. He had investigated the matter thoroughly, and had become an advocate of hard roads through noting their effect on property. He had seen land lying contiguous to a hard road rise in value five to ten dollars an acre soon after the completion of the road. He then showed the actual cost a mile of the road, and how that cost was paid without distressing any one. He showed that the cost of maintaining a hard road after it is constructed is only a mere fraction of the cost of maintaining our present style of dirt roads. The large amount thus annually saved goes a long way toward paying the cost of building the good road, so that road-taxes would be but little higher while the bonds are being paid than at

present. Then they would drop to next to nothing. He further showed how most of the farmers could pay quite a portion of the tax by hauling the material, helping to grade, etc. He presented the entire matter so plainly that a child could understand it, and he won many farmers to the good-road side of the question, while many others stated that they would have no particular kick to offer if they were assured positively that every cent of money raised for the purpose would be honestly expended in building the road.

Foot-paths Seven years ago I tried to induce farmers in this locality to construct good foot-paths at one side of the highways, so that people, especially school-children, would have a good dry place to walk on when the roads were well nigh impassable. To show how this could be done at little cost I induced a live road overseer to assist me, and together we constructed a quarter of a mile over some difficult ground. I built up the grade four feet wide, placing the sods on the outside next to the ditch and hollowing out the surface of the pathway from two inches at the outer edges to four inches in the center. This hollow was then filled with coal ashes, obtained at a mill, and nicely rounded over. When the path was completed the ashes were about three inches deep at the outer edges and five or six deep in the center. The actual cost of the work and material was very little, and the path is smooth and hard as a rock to-day. We offered this work as an object-lesson to show how easily such paths could be constructed, supposing, of course, that others, seeing what an excellent convenience such a path is, would continue the good work. But though a great many people walk over it almost every day, not another foot has been constructed in the township. Where the expenditure of some labor and a little money for the public good is involved the average farmer is a wet blanket to the enthusiast.

Lift the Mortgage A. D. W., Wisconsin, writes me that he has "done pretty well this year," and he has enough cash in the bank to lift a small mortgage off his farm; but he is badly in need of some additional buildings and fences, and he is undecided whether to act upon the advice of the mortgagee, and let the mortgage run on a little longer and put up the buildings and fences, or to pay off the mortgage and "wriggle along" a few more years without the fences and buildings. He says his wife favors paying off the mortgage, but he wants to know what I think about it. I can tell him in a few words. Just step down for a few days and turn the management of the whole matter over to that wife, and don't waste any time in doing it, either! Give her the opportunity to "lift" that mortgage and kick it so high and far that it won't even cast a shadow. When a man owns his farm free of debt he is a small-sized king. He owns the earth—or at least that portion he lives on—and he is the most independent thing living. I have known men to let a little mortgage run on. They were advised to do so, and eventually they lost the farm by reason of a succession of bad seasons or of bad luck. But I never knew a man to lose his farm if he first paid off the mortgage, and then never spent money until he had it.

Belgian Hares I see that Secretary Wilson is investigating the Belgian hare. The importations of this animal have been so large, and they are increasing so rapidly in captivity, that he has decided to take action in the matter. He says he is informed that there are fifty thousand of these hares in Los Angeles alone, and that several thousands have escaped and are at large, and that the situation has an ominous aspect. He fears that they may gain a foothold in this country, and rival the pest of Australia. He will thoroughly investigate the matter at once, and take such action as he may deem necessary. Our common rabbit has given me trouble enough, and I only hope that the Belgian rabbit will not add to these troubles.

FRED GRUNDY.



FARM THEORY AND PRACTICE

STABLE VENTILATION.—There has been much condemnation of open stables affording ventilation between the boards, every crack admitting the chilled air of winter days, and too much can hardly be said. But if there be any choice between the open stable that chills the cows and other stock and the tight stable that has no ventilation and sunlight, the advantage rests with the former; the latter is the more deadly in its results. Foul air, darkness and dampness are responsible for a vast amount of disease. Fresh air is a necessity to a healthy being, human or brute. How should it be secured? The two important facts in ventilation to be borne in mind are, first, that heated air rises; and second, foul air charged with carbonic-acid gas is heavy and descends to the floor.

Bearing these simple facts in mind, the correct system of ventilation is easy to find. The shaft, or flue, that carries the foul air from the stable to the roof should descend nearly to the floor. There is found the gases that should be removed. To get them to rise it may be necessary to have an opening in the shaft near the ceiling of the stable, for admission of more heated air to start a draft in the tube. Then the opening should be closed. All the air is warmer than the outside air, and the draft is maintained just as in an open fireplace, until the air is made pure, and then the ventilator may be closed if desired. This disposes of the foul air. The entrance of fresh air should be secured by means of pipes that enter the stable near the floor and empty near the ceiling. This outside air will rise in these pipes and be diffused in the upper air, preventing drafts.

Make the shafts, or flues, of matched lumber from floor to roof, or they will not "draw," just as a chimney would fail. For twenty or thirty head of cows or horses have two of these shafts running to the ventilator on the roof of the barn, each one in dimensions one by two feet. That gives good capacity. The intake-pipes, reaching only from the ground outside to the ceiling inside, should likewise be tight. Fresh air admitted in a way that prevents direct drafts, and the removal of impure air, are the great needs of our homes as well as our stables. The air cannot be used over and over again by the lungs without leaving the seeds of disease. The blood fails to remain pure. Consumption is only one of the ills that result from lack of proper ventilation. There would be very little of it in our cattle—tuberculosis—if ventilation and the admission of sunlight had received the same attention as careful housing.

STAMPING OUT TUBERCULOSIS.—In many states the laws controlling official action respecting tuberculosis have caused friction, and neither the state nor the dairymen have been pleased. One thing is certain: This disease cannot be stamped out merely by the condemnation and slaughter of animals found affected. The conditions that foster the disease are more perilous in the long run to public health than the existence of an occasional tuberculous animal to-day in the dairies. We should go to the cause rather than make a big public demonstration over the removal of cows already affected by these disease-breeding conditions. That is to say, the chief effort of the state should be to secure fresh air, sunlight and cleanliness in dairy-stables. Then will this disease disappear rapidly. Sunlight kills germs of disease. Inspect stables rather than cows. When they are right the disease will cease to spread.

SUCCULENT FOOD.—It has not been shown that corn stover properly cared for loses very much more actual food value than does silage. In each product there is some loss. But it has been clearly demonstrated that a given amount of food, in form of silage, will give greater results in milk production

than the same amount of food in corn-meal and stover, unless succulent food, in form of beets, etc., be given freely. The reason is that succulence is demanded by all herbivorous animals in all seasons of the year. The best condition powder is food of a succulent character. Without it the system cannot do its work well. Equally this applies to ourselves. Fruit and vegetables should be eaten every month in the year. A grain and hay ration for our animals, unrelieved by roots, silage or other like corrective, and a meat and bread diet for ourselves, without fruit and vegetables, tend to invite rather than to repel disease.

STRONG CONSTITUTION.—In all animal life a strong constitution is the best safeguard against disease. There are disease germs almost everywhere. Neither we nor our animals can escape many of these germs, and must depend upon a healthy, strong body to throw them off. If the blood is aided by an abundance of pure air, if there is proper nutrition, and if the sunlight is used to stop the spread of germs, the chances are that disease will be held in check or driven out. This is notably true in the matter of tuberculosis in our dairy-cows. The constitution has been neglected, milk production having been the one consideration. There has been extreme early breeding, to strengthen the milking habit, and this abnormal development has been too often at the expense of rugged strength. We have gotten animals lacking the power to resist germs. Fight tuberculosis with constitution kept rugged by rational treatment.

DAVID.

THE LIMIT OF IRRIGATION

A good many people in the eastern half of the United States are afraid that the development of the arid regions by the construction of reservoirs would cause an oversupply of agricultural products, and therefore work a hardship to farmers in other parts of the country. The real basis for this fear will appear from a study of the following facts:

There are now irrigated in the United States about four million acres, equal to one tenth of the acreage sown to wheat each year in this country, or one nineteenth of the area of the corn-fields. The total cultivated acreage in the United States is about sixty times the irrigated acreage.

The Chittenden report, upon which the advocates of government aid for irrigation base many of their estimates and guesses, suggests a systematic plan of reservoir-construction to extend over a period of one hundred years. Following is the last paragraph of Captain Chittenden's summary:

"The total extent of a reservoir system in the arid regions which shall render available the entire flow of the streams will not exceed 1,161,600,000,000 cubic feet. If the construction of such a system were to consume a century of time it would represent an annual storage of 11,600,000,000 cubic feet, or 266,300 acre feet. At \$5.37 an acre foot this would cost \$1,430,031 per annum. This amount distributed among the seven-teen states and territories of the arid section gives an average annual expenditure in each of \$84,119. The annual value of the stored water would return the original cost and maintenance in an average period of three years."

Unfortunately Captain Chittenden's recommendations are being misrepresented by interested advocates of reservoir-construction by the general government. On this account it is important to know exactly what those recommendations are, as well as what they mean. Let it be noted that Captain Chittenden says the storage capacity of a reservoir system to "render available the entire flow of the streams will not exceed 1,161,600,000,000 cubic feet"—an amount of water equal to about one third of the annual flow of the Nile. The Nile waters, according to Willcocks, irrigate 4,955,000 acres; according to Wilson, "about 6,000,000 acres." I have read somewhere that nine tenths of the water of the Nile is used in Egypt, only one tenth reaching the sea.

Water is used so economically in some parts of arid America that an acre foot (enough to cover one acre twelve inches

deep) can be made to irrigate an acre of land sufficiently to produce a good crop. Apply this liberal measure to the amount of water which the Chittenden report says might be stored in the Western states and we have a total of 26,630,000 acres. The immediate addition of this amount of land to our cultivated acreage, although it would increase the agricultural product of the United States only about ten per cent, would work a great hardship to farmers throughout the country.

But the suggestion of Captain Chittenden is that this system be constructed in a hundred years. His plan would add to our cultivable area 266,300 acres each year—about one tenth of one per cent of the acreage now in cultivation. Of course, the effect of such an increase would not be appreciable.

Those who propose the construction of such a system in ten years do not appreciate the magnitude of the work to be done, nor the opposition to be overcome, before appropriations could be secured. Of course, the work could be done if the money were available—which is supposing what is next to impossible. There are other difficulties.

There seems to be no good reason for trying to develop the system proposed in the Chittenden report in less than twenty-five years at the shortest. Constructed at such a rate the system would add about a million acres a year to our cultivated area, representing a ratio of increase about equal to one to two hundred and fifty. Our annual increase of population is many times greater.

There can be but little doubt that the Pacific railways were built before our industrial needs justified so great an outlay. There is almost absolute certainty that the rapid agricultural development of the West, which was caused by the construction of those great railways, was a great injury to the agriculture of the country at that time. The disturbance was too great. It is impossible that there should be such a disturbance by reason of the construction of storage-reservoirs in the West. The land is here, but not the water. The water can never be had for a third of the land. D. W. WORKING.

THE BOY'S PATRIMONY

I recall a sheep transaction, which I will detail solely in the hope that it may furnish food for thought to the fathers of growing boys.

Away back in the seventies a little fellow of eleven bought of his father, a prosperous farmer in an Eastern state, three choice ewes, giving his note therefor, and agreeing to take full charge of the flock in return for their keep. He made the flock, about seventy-five head, his special care. This venture prospered; he paid the debt, principal and interest, and in three years was the proud owner of eight sheep. Then he let them to his father, to double in three years, at the same time agreeing to continue to do the shepherd act.

At the expiration of that time he proposed to his father that the sheep be delivered to him or to make a bargain for another term of years. The father replied, "Give you sixteen sheep? Nearly a quarter of the flock? I'm not going to cut a good herd to pieces like that! I don't want to hear any more nonsense about 'your sheep,' so hush it for once and all!"

The boy wasn't a fool. He knew that a minor has no property rights, and he knew that his father usually meant what he said. That closed his first business venture. He swallowed his disappointment, and as he had been religiously brought up, and taught to "honor thy father and thy mother," he tried to make himself believe that perhaps it was all right, anyhow.

He worked faithfully on the farm until twenty-one, his father meanwhile giving him vague promises of an education. He was then told that if he would stay two years more he should be sent to college. He stayed. He worked well and faithfully. He was well treated and not made a drudge, but all he received was his clothing. When he was twenty-three a new house costing thousands had just been built and another forty acres added to the farm, and the college course was in the

same condition as his herd of sheep. Now, that father was an honorable man, and his word among men was as good as his bond. He was a pillar of the church, a justice of the peace, a "solid farmer," honored and respected by his neighbors. I do not believe he intentionally meant to wrong his son; he loved him as well as the average parent loves his child. Yet can one wonder that by this time the young man had lost faith in his father, and that against parental remonstrance he determined to go "West?"

With heavy heart and empty pockets, untaught save in toil, unsophisticated, ignorant of the world, he left the parental roof illy equipped for life's battle.

He did not go entirely to the bad. He was not lazy or vicious. He met with many hard knocks, had his ups and downs, and took them philosophically. He never amassed property. For years he has been a wandering cowboy on the southwestern ranges, earning an honest living by hard work, and though his father regards him kindly, yet he looks upon him in a certain sense as a "black sheep," though the son has never done aught to bring discredit upon himself or reproach upon his family.

When he visited home a few years ago his father embraced him with tears, and expressed the hope that he had come home to settle down; and later, when the son prepared to return to the only calling he is now fitted for, the father reproached him for his unfilial conduct, and expressed grief that his son should continue such a life against his parents' wishes. The son is still a wanderer, and probably always will be.

Now, this is not a pleasant tale. It is told with reluctance, and is coupled with the hope that the reader will not misjudge the motive that prompts the telling. It is not told to cast reproach upon a parent, who doubtless thought he acted for the best. If one father reading this will heed its obvious moral, its purpose will be attained.

VAQUERO.

BUTTING AGAINST HIGH PRICES

Dairy-farmers should aim to grow more oats, barley, peas, red clover, Alsike clover, alfalfa, soja-beans and other nitrogenous feeds, and then refuse to purchase wheat-bran at over fourteen dollars a ton, or linseed-meal at over twenty dollars a ton.

Every dairy-farmer should purchase a good grinding-mill, and thus be prepared to grind up his own oats, barley, peas, corn, etc. The necessary investment is not large. The teams are not busy, and will be all the better able to stand the spring plowing if they are permitted to furnish power for a grinding-mill for half a day once or twice a week during the winter. But if the teams are busy, perhaps there is an idle steam-engine that may be made to earn a little dividend; or the wind-wheel may be required to work a few more hours a week. No matter what the power used, so you grind up home-grown feeds and refuse to pay unduly high prices for bran, middlings, linseed-meal, gluten-feed, etc.

When nails and wire were at the highest notch farmers refused to purchase, and factories became stocked up. They could make no use of their goods themselves, and finally lowered the prices in order to exchange goods for cash. Linseed-oil is too high in price, and farmers should mix their paints with skim-milk rather than purchase the oil.

Every necessary or useful article produced should be enabled to command a fair price and pay a reasonable profit to those who produce it; but when any men or association of men combine to demand exorbitant profits the people should refuse to purchase their productions so far as they may be able to dispense with them.

When nails were four dollars a keg I advised hundreds of those who came to me for information about building to postpone building if they could possibly do so. Now that nails are lower I should say if buildings are needed make preparations to build, especially if you can use unsalable timber from your own wood-lots, for lumber is very high in price; but farmers themselves are much to blame for the advance in price of lumber. JOHN L. SHAWVER.

NOTES FROM GARDEN AND FIELD

FALL-BEARING STRAWBERRIES.—A reader in Union Springs, Alabama, asks me whether there is really a variety of strawberries that can properly be called "fall-bearing;" and if so, where he might secure a few of the plants. To tell the truth, I do not believe that any such variety exists. The nature of the strawberry-plant is to produce fruit in the spring (here in late May and through June), and it is hard to fight against Nature. It is often supposed that a plant, when all the blossom-stalks have been nipped out in spring, will try to make up for this by making an effort to produce blossoms and fruit in the fall. But in many experiments made on this theory recently the plants have usually refused to live up to that supposition. Then we have the Alpine Everbearing varieties, and it is claimed for them that they yield berries all summer long, and perhaps way into the fall. But in our usual hot and dry summers even these varieties fail to live up to their reputation, and for the past two years I have not had even a fair taste of berries from them after the expiration of the time for the main crop in June. Probably if I had shaded the plants and irrigated them freely they would have bloomed and fruited right along, also far less freely than in June.

It is true, however, that some of the growers in my vicinity have gathered a small picking of fruit on the Wilson both this year and last year in October or even early in November. After the first fruiting season the weather continued dry and hot, so that the plants had a hard time of it, and only just managed to live until rains set in again in the fall. These plants then, having had their rest, pushed forth a new growth, and produced bloom and fruit. The "Repeater" is claimed to give two or three different crops during the year, being a regular fall-bearing sort. Whether this is the natural tendency of the plant or has only happened a few times accidentally, as in the case of my neighbors' Wilsons, remains to be seen. I am not too hopeful, by any means. The other new French berries, introduced by the same firm as true ever-bearing sorts giving large fruit, are probably of the character of the Alpine sorts. Under favorable conditions they may produce a little fruit right along and up to fall, but even with them I am not too confident of getting a paying fall crop. I have a few plants of the three sorts mentioned now growing on my grounds, and will be able to tell more about them next fall (1901).

MILK FOR MONEY.—G. F. McA., of Osego, Ohio, writes me that he owns a small farm worth about \$2,500, and has been thinking of selling out and starting a milk business in a prosperous town of about ten thousand population. He wants my advice in the matter. Possibly he can make his small farm pay quite well as it is. I do not know how he is situated where he is now. Sometimes even a small country village offers fair opportunities for selling garden produce and small fruits at quite remunerative prices, and in such a case I would try to fill the demand for these articles. If there is not much of a chance to make a decent living in this way, then the question comes up whether it would be advisable to sell out and move to some other place. I know that the milk business gives a very fair remuneration to those people (around Niagara Falls, for instance, and at other points) who take good care of it. Of course, a milk business attended to as it should be means early hours and late hours, out in good weather or in bad weather, traveling good roads and poor roads, just as it happens; it means strict regularity, honesty and business tact, etc. Possibly it might be best for a person wishing to engage in such an enterprise in a strange city or large village to just hire out for a few months or a year to an established milkman, to learn the ins and outs of the business, become acquainted with the country and the

people, and then, if possible, buy out an already established business even if small. All that is wanted is a starting-point, as a person of ability, business tact and especially strict honesty will have no difficulty in extending a business of this kind after it is once established on small lines. Of course, you must have good stock, say Holsteins for quantity, with a few Jerseys mixed in to improve the quality of the product. Then you must manage the herd so as to have about an even supply of milk the year round, and you must feed such things as will keep your cows in health and in full flow of milk right along. It involves raising corn for silage, having good silos, etc. Common sense and business ability must be the foundation upon which the business ability is built up. Milk is now retailed hereabouts at six cents a quart, which leaves a big margin of profit if the business is properly managed. I would deal only on a cash basis, refusing credit to everybody. It might mean fewer sales, but it would avoid bad debts and losses. The person who will furnish good milk, treat his customers honestly and politely, and be regular in his visits rain or shine, will have no difficulty to find customers for all his products; and he will lay up money if he will steer clear of the saloons, where so many milkmen spend much of their earnings.

POTATO-ONIONS.—A reader in West Virginia tells me how he raises his potato-onions, as follows: "I cover my ground with good stable manure, then plow this under, and make the surface as fine as possible by harrowing. Then I lay off the rows about eighteen inches apart, and set the onions in the rows about six or seven inches apart, and cover about six inches deep. I put the large onions by themselves, and the sets by themselves. The former make sets to be planted out another fall, while the sets make the large onions for spring sales. I have early onions in spring, and what is left over I pull in July, to keep over for fall planting. I do not leave them out in the sun after pulling, but cure under shelter." I myself am not very much in favor of these rather coarse and high-flavored bulbs. For earliest onions I use the Egyptian or Tree winter onion, which is so hardy as to grow whenever the ground is not frozen. They give me green onions for the table almost as early as spring opens and nearly by the time that we can plant sets outdoors. This I do just as soon in spring as a little patch can be gotten ready, and I always try to get Prizetaker sets, which can be as easily grown as any other sets, and are remarkably good keepers, making by far the best-flavored (mildest) green onions which I can grow from any sets obtainable. For green onions to come later my practice is to plant Prizetaker and Gibraltar seedlings (grown in greenhouses) rather close in the rows and as early in the spring as possible. Then to provide the finest green onions for late spring and summer I sow seed of the Gibraltar onion thickly in the row, almost as thickly as for sets in early spring, and repeat every few weeks for succession.

DISEASES OF CHICKENS.—I am often asked about the diseases of chickens, turkeys, ducks, etc., and what to do for them. My experience is that it is an unthankful task to doctor fowls for interior diseases. I doctor them for scaly-leg (by immersing feet and legs in kerosene up as far as affected), and I apply kerosene on the roosts and nests, in order to kill mites, lice, etc. But when it comes to managing fowls afflicted with diseases such as the books describe as roup, cholera, crop-bound, tumors, etc., the only way to do seems to kill them and destroy the carcasses, and then look to the disinfection of the premises and the houses, and to the food and drink. Infectious diseases are often due to stagnant pools of water, especially in the manure-yards, etc., and to filthy quarters. With proper food, pure drinking-water and clean poultry houses and yards diseases should be the exception. T. GREINER.

THE BANANA APPLE

So many new fruits are being brought before the public for attention that

we may be wary of even testing all of them. Although there is yet room for many good ones, we have no place for any that do not have points of marked superiority. The Banana apple has now been tested long enough to prove that it is worthy of a place on the list of varieties for home use and possibly for market. It originated in Indiana, and has been tested mostly in the central states, but I have no doubt of its general adaptation over the main apple-growing regions. The tree has a good habit of growth and is said to bear well. The fruit is of medium size, is nearly round in shape, being of almost equal diameters; the surface is very smooth, glossy and waxy, and the color is rich yellow well shaded with a crimson blushing on the sunny side; the flesh is fine-grained and firm until full maturity, when it becomes tender and melting. In flavor it is subacid and about equal to the best, although I think Grimes' and a few more are a little superior. It is much like the Golding, formerly known as American Golden Pippin, etc., but its size is a little larger. In season it is a late fall or early winter apple in the central states. Those who admire a yellow apple will like this one, for it is about as handsome as one of that color ever gets. For the general market, where red apples are mostly in demand, it would not be so desirable.—H. E. Van Deman, in Rural New-Yorker.

ORCHARD AND SMALL FRUITS

CONDUCTED BY SAMUEL B. GREEN

INQUIRIES ANSWERED

Weed for Name.—W. H. W., Kelly, Neb. The leaf you inclose looks very much like the loco-weed. I think, however, that it is from a near relative, and not the true loco-weed, and I wish you would send on a larger specimen that will include the stem and some of the leaves as they are attached to the plant. This can easily be sent through the mail if wrapped in strong wrapping-paper. For the benefit of other subscribers it might be well to say here that the loco-weed is a low, perennial plant, somewhat resembling the well-known lead-plant, or shoe-string weed, of the Northern states. This weed is found quite abundantly in parts of Texas, and even as far North as central Nebraska. As a rule cattle do not feed upon it, but in times of drought they will sometimes eat it, after which they are liable to be affected with a dizziness and weakness, which frequently result fatally.

Goldthread.—J. L. M., Clayton, Ill. The specimen inclosed is known as goldthread (*Cuscuta polygonorum*). It is a little yellow, leafless vine, a near relative of the morning-glory, that is generally found growing on the goldenrod, marigolds and similar plants, and sometimes ties the mass together so solidly that it is with difficulty that one can make headway through it. It comes from seed each year, but after getting a good start it becomes attached to some plant, sends its suckers into the sap region, and after becoming attached to the plant it generally loses its connection with the ground and for the rest of the summer lives as a parasite upon other plants. If it comes up and cannot find a host-plant it dies in a few days. A species of this, known as clover and flax dodder, is sometimes injurious to flax and clover fields, but the kind of plant you send is not liable to be troublesome in this way.

Apple-leaf Aphis.—J. Y., Peoria, Ill. The branch of one of your apple-trees, which you send, and which has the leaves curled on it, is injured by the apple-leaf aphis, or louse, which infests it, and is a very common source of injury. Where it comes on the trees in the latter part of summer or in autumn it does but little harm, as it simply serves to check growth a little earlier than is natural; but when it attacks the foliage in early summer it is liable to cause serious injury by dwarfing the growth of the tree. This insect winters over in the form of little black shiny eggs, which will be found around the base of buds on plum-trees, and are easily seen by any close observer. The remedy is to dip the tops of the infested branches in a strong tea made of tobacco-stems; or a kerosene emulsion may be used the same way.

Chinkapin and Chestnut—Fig Culture.—G. H. W., Washington, D. C. The chinkapin and chestnut may be planted in the autumn in sections where there is not much danger from squirrels or other rodents destroying the seed during the winter. Ordinarily, however, it is safest to mix the seeds with sand in a box and bury outdoors and then sow early in the spring. The seeds of these species are difficult to carry over successfully in cellars, as they are very liable to mold where it is damp, or dry out where it is a little dry. They are quite easily

grown if handled as directed.—Fig-growing has never made much progress in the United States. The fig-plant will endure perhaps twenty degrees, or, under favorable conditions, more than that, of frost, and it may be cultivated in the latitude of Washington, D. C., quite successfully if it is laid on the ground in the winter and protected. This, of course, is in a small way, rather as a curiosity than for commercial purposes. The fig has been planted in large quantities in parts of California, where the trees grow very large and make beautiful specimens; but they have generally disappointed the growers, for the reason that the fruit is seldom of good quality there, and as yet practically none of the California figs are considered good enough to compete successfully with the imported kinds. The reason for this seems to be that the flowers are not properly fertilized; that while the fig fills out, and is as large as it would be if it were fertilized, yet it fails to secrete the sugary syrup which is so desirable in this fruit, and it sours soon after picking. Hundreds of acres of land which had been planted to figs in parts of California have had their trees grubbed out and thrown away. How it acts that the fertilization of the flower results in the formation of the syrup is not known, but careful experiments made by scientific men show that when the figs are fertilized by the pollen of the Capri fig, by blowing the pollen into them with a quill or other tube when the flowers are ready, there results sweet fruit, while lack of this treatment makes the fruit of inferior quality. In Smyrna and similar sections where the fig is grown successfully this work of fertilization is done by a minute fly, and although it has been imported to this country, yet it has failed to multiply sufficiently to give the best commercial results.

Ash and Pine Seedlings.—H. C. P., Big Rapids, Mich., writes: "I have nearly a bushel of white-ash tree-seed. I want to plant it and grow it, but do not know how. I have a cultivated corner of three acres partly surrounded by timber. The land produces oak, beech, maple, hemlock and pine, and is sandy, gravelly and a fairly good soil. Also I have a grove of pine-trees that bear a great many cones. I would like to plant a few acres in pine, but I do not know anything about it. I cannot identify the seeds. The cones have now fallen off, and lie open on the ground in great numbers. Has the seed fallen out and gone, or is it in the shells that now stand apart around the stem? How shall I proceed to accomplish my purpose?"

REPLY:—The ash-seed which you have should be kept in a cold, dry place over winter. The best way of handling it is, perhaps, to lay it upon a hard walk, or similar place where the soil is hard, and cover it with a box, to protect from injuries from rodents and birds. In the spring of the year it should be sown in rows about three feet apart, as early in the spring as the soil can be worked. You should use about fifty seeds to the foot of row. The seedlings should be about ten inches high by the next autumn, when they may be transplanted then or the following spring. If you wish to sow the seed in a place where it will remain, then it would be desirable to have the rows about eight feet apart; but if to be transplanted, then three feet apart is sufficient. Good cultivation, about the same as that required for corn, should be given during the growing season. The pine-trees which have dropped their cones probably shed their seeds before the cones fell. It is very easy to distinguish the seeds from the other portion of the cones if you will examine them closely and use careful judgment. You will find at the base of each of the scales which has opened that there are two little grooves where the seeds were, and it is quite likely that you may find a few seeds still remaining in some of the cones. These seeds are brownish in color and oval in form, and when they first come out of the cones frequently have a thin wing attached to them; but this generally falls off easily, leaving the brownish seed without any attachment. The habits of pine-trees in regard to their seed are quite different in different species. The Norway pine, for instance, drops its seed early in September, some time before the cones fall. The white pine drops its seeds much later in the autumn, and its cones in winter. In each of these species the seeds fall before the cones. On the other hand, in the case of the Scotch pine the cones do not open until the following spring, and it is customary to gather them in the fall. In the case of the Jack pine the cones will frequently remain on the trees for several years after they are ripe without opening, and I have known them to remain as long as fifteen or twenty years, and have even seen them where the wood had grown up around them and they had become imbedded in the tree, forming a sort of knot; and yet the seed of these old cones is frequently of very good germinating quality. In the case of this species and the Scotch pine it is customary to gather the cones before they have opened, and then put them in a hot place for a little while until the cones open. Where it is done on a large scale especially constructed ovens are used for this purpose, which causes the cones to open, and the seed may then be shaken out. I think if you take a cone and examine it carefully you will have no trouble about distinguishing the seed from the scale.

A RACE OF FARMERS

[CONTINUED FROM PAGE 3]

single fruit-tree or a green hedge. Of course, the nobles, who hold a great deal of the soil among all the Slavs, are using modern methods of agriculture, but their success is rather dubious. These nobles spend their winters in Paris, their summers in some watering-place, and their large holdings are fast disappearing in spite of American reapers and mowers, which they buy in large numbers. We have, on the whole, overrated the Slav, and seventeen years of life among all classes of them confirms me in the belief that the Anglo-Saxon has nothing to fear from that source. That much-threatened competition of Siberia with our grain production would come speedily if the Russian was an Anglo-Saxon farmer; but he is not. It will take a century and more before Siberia will be anything like North Dakota, if it ever reaches that level of productiveness and intelligence. My advice to the American farmer is to go on planting his grain, as well as his ideas, and not worry a bit about the coming struggle. The world will belong to that race which will best be able to rule it by its industry, its intelligence and its true interpretation of the will of God, and that at the present time is not the Slavic race.

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THE FARM GARDEN

A good garden is indispensable to a farmer's family. It may be made with a view to profit as well as pleasure. Its size, of course, will depend upon the size of the family, and also upon the market and its distance.

Not only should the farmer have a good garden, but also a very early garden. It is the early bird that catches the worm; so with very early vegetables. They may be a little more trouble than the later, but we will be remunerated for our trouble. There has been a great deal of satisfaction to me to be the first one in this town to furnish new vegetables.

Any work we delight in is easy. I would think it a great sacrifice if I was deprived of the privilege of gardening as soon as the beautiful spring opens. To be truly successful one must begin preparations in the fall. See that your hotbed-frames are in good shape. Store a lot of rich soil in barrels or boxes in the cellar, so you can use it at any time for your earliest sowing of tomato, cabbage, pepper and other seeds. Study your climate, and sow your seeds accordingly—early or late. Further, study your market.

Did you ever try to create a market? I, or rather my youngest boy, was very successful in creating a market. He has sold all my vegetables, fruit, poultry, etc., for four years past, and is now only twelve years old. He received ten per cent of all sales, with the understanding that the money was to be wisely spent, and not for knickknacks. He buys most of his own clothing, tablets, paper, pens and other school necessities. I think he sold over seventy dollars' worth one year. Besides, he does not lose any time out of school.

As soon as seed is sown in boxes in the house in February or March, and the tiny plants appear above ground, look out for mice; they are fond of them. After the second leaf appears give them more room, and continue transplanting as often as they crowd. Do not set in the open ground until all danger of frost is past. In the meantime I prepare a suitable space in a warm spot for my earliest vegetables. While it is yet doubtful about frost I sow lettuce, radishes, spinach, peas and beets; not too many at a time, as it is still risky. Should the frost kill them you lose little seed and time. I also plant some potatoes and sweet-corn very early. You may win and you may lose. If you win it makes you glad, and if you lose you are prepared for the disappointment. As the weather grows warmer you can sow and plant the foregoing vegetables weekly in succession, and have tender vegetables all through the season. In my family they are very fond of green peas, consequently I sow large patches, as my market for them is good. For beans I have little market, but I plant an abundance of fall beans as shell-

beans for winter use. Tomatoes are a staple vegetable for farmers to use fresh as well as canned and for pickle and catchup. My earliest of vegetables are the winter onions; they are delicious, and can be sold easily when neatly put up. Spinach, pie-plant and asparagus all may be grown very early by using horse-manure liberally.

Right here I want to enter a wedge for flower-lovers. Early in March I plant my sweet-peas, if possible to work the soil. Subsequent frosts will not hurt them. I have a bed one hundred and twenty feet long along the public highway, one fourth of a mile out of town, and a beautiful sight it is, supported by mesh-wire stretched on posts fifteen feet apart.

But to return to the tomato. If you have more than you use or have sale for you may feed them with profit to hens or cows. Carrots, beets, mangel-wurzel, parsnips, etc., are all very valuable vegetables for house use as well as for milk-cows and horses. I usually grow sugar-beets by the wagon-load and feed them to my cows and hogs. You need not cut them for the hogs, as they eat them as eagerly as apples.

Farmers around here talk about my success with hogs—no, it's management in taking care of them. Mine are never sick. Roots give the hogs large digestive organs and good sound muscles.

Lima-beans are very profitable. I prefer the pole variety. Cabbage should be found in large quantities and a variety. Do not miss having a little Savoy, for its great tenderness, and some Red Rock for pickling. Flat Dutch or Drumhead gives satisfaction for a general crop. Of course, each one has his own choice. Where cauliflower can be grown it is profitable. Early sweet-corn sells well and tastes delicious. The cucumber must be remembered, and if rightly managed may be had very early.

I grow no melons, as I live too near the good town boys, who consider melons and walnuts common property. Lettuce! Yes, lettuce we must have; it can be prepared in so many ways for most people, except the Scandinavians. Onions have been very low in my local market, so I did not raise over five bushels. I received a great deal of satisfaction from the ground-cherry, so easily grown and saved. I put up many gallons for winter use. My soil being clay I do not undertake to raise sweet-potatoes. Radishes, early and late, ought to be found on every farmer's table. We have many improved squashes to-day, and they certainly are worth the labor; but with me the squash, pumpkin and potato are more for field culture rather than garden. Shall I forget the turnip? Oh, no. Some are fine for table, as well as for stock.

The farmer's garden ought to be in long rows, to save work. It should be rich ground, enriched continuously year after year, and well drained naturally or tiled. It should get very thorough cultivation, and one should not look at a few dollars when buying tools to work it with. I have many improved tools for mine. Drills, wheel-hoes and cultivators all pay, because they save labor and do good work. Your garden is incomplete without a variety of small fruit and enough of it. I have strawberries, raspberries, gooseberries and currants. This small fruit should be in rows, as also the pie-plant and asparagus. Small fruit needs to be cultivated regularly and fertilized.

With such a garden you need not be poor. But you must not let the wife do all the work in it, nor the wife the man, or it will be gardening without pleasure. A garden without a woman in it does not seem natural. Such gardens are few, I am glad to say. Three cheers for the sunbonnet in our gardens!

HENRY BEELER.

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A CHEAP CREAMERY

There is a plan by which even the poorest hard-worked renter and his wife may make gilt-edged butter with no unnecessary outlay.

A well of water we find on every farm, and very often a pump. Now, every team of farm-horses must have fresh water three times daily, and other stock need it; let all this water flow from the well nearest your house. Cut a large barrel in two, or a little deeper than half—a kerosene-barrel

will do if previously cleaned. Place this a short distance from the well. Connect with a V-shaped trough if you have not the money to buy pipe. Use deep milk-cans instead of crocks, and save time and labor in washing one vessel instead of four. This three-fourths barrel will hold five long, narrow cans. Let the water run through this barrel to your watering-trough for stock. Set four upright posts, two higher than the others, for a sloped roof over the barrel as high as required. The roof may be made of broken bits of fence-boards, and as it only needs to cover the barrel, will not be large. Perhaps some one on the prairies of Dakota will say they have no boards. Well, I would not be balked at that. Make a trestle roof and train wild cucumbers or morning-glories over it; they grow as swiftly as Jonah's gourd. I boarded up the lower end of mine at first, then, as I could, inclosed the two sides and left the highest side, facing north, open. As soon as I could afford it my barrel gave place to a large round tank. But, you see, on a small scale the barrel would answer the same purpose when there is a lack of funds. Have a good stout plug in the lower end of the barrel, let out the standing water when needed, and continue to pump—the stock will not object. When they have enough pump your barrel creamery full and leave it. This keeps the milk sweet and cool. Thus good, sweet buttermilk and cream can be had on every farm, whether owned or rented, at a cost within the reach of all.

KENDALL PERRY.

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CORRESPONDENCE

FROM TEXAS.—I will write a few words about the coast country of Texas as I find it after residing in it for thirty-one months. Since I moved from central Illinois my wife had the asthma, and we thought this climate might do her some good, and it has cured her. As a farming country it is not to be compared with central Illinois. I would advise any one who has a good home to stay there, unless health is the main object. It is true we can grow nearly everything here; but keeping it after it has matured is very hard to do. The weevil eats the corn, and Irish potatoes commence to rot almost as soon as they are taken out of the ground. Butter is hard to make during the four summer months, but we can make good butter for eight months in the year. Hogs, sheep, goats and cattle do well, and there is plenty of grass the year round. One can buy land at from \$4 to \$20 an acre, and can rent all the grass-land he needs at ten cents an acre; besides, there are thousands of acres of free range. If a man has money to buy ten acres for a homestead, and can buy fifty head of cows and stay with them, then he has a fortune in the coast country. The climate is all that a person can desire. There is good water at one-hundred-feet depth, and plenty of fuel; but fuel is not so much needed as in the North.

Barker, Tex.

FROM FLORIDA.—A few years ago there was a great cry that farming was overdone. And this, doubtless, started the tide toward the city and town life. There never has been so fine a prospect before the farmer of any section of our great land as now, and thrice bappy is the man who gets a home of ample area. The writer settled on the prairies of Illinois in 1859, and spent seventeen years in that good state, and afterward six years in southwestern Iowa, and in all those years never saw a man who lost money by having plenty of land if paid for, or if in position to make reasonable payments and keep down interest and taxes. That day is now past unless in the Far West or the "Sunny Southland." West Florida has yet a million acres of land subject to homestead. Much of this is rather poor, sandy soil, which I would not advise Eastern people to settle upon; but there are sections of as good land as can be found in the South. These are somewhat removed from towns and railroads. If a group of old acquaintances were to come together they could find solid sections out of which four homesteads could be made, and others in such proximity as to form a neighborhood, with school, church and society. Our lands are yet so cheap that good, partly improved farms can be had from one to three miles from railroad at from \$3 to \$5 an acre. The writer has been in West Florida for the past eleven years engaged in farming and saw-milling, and can freely say that there is no more healthful and comfortable place in which to live and work and sleep. All we lack to make the grandest country on earth is a few thousand people with a little money and choke-full of day's work. A man with \$600 to make a homestead hum would be a "prince" among our natives. We want such in Florida, and we want them had.

Grand Ridge, Fla.

J. T. P.




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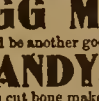
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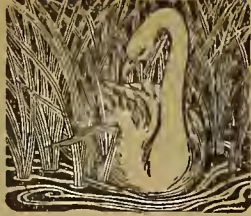
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THE POULTRY-YARD

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HAVE A PLACE FOR THE HENS

ASERIOUS error claimed is the custom of keeping hens until they become too old for profit because they were choice birds and good layers when young. A hen of any breed will lay as many eggs the second year after she commences laying, but it is claimed by some that fowls kept by a farmer after they are two years old are kept at a loss, so far as money is concerned. When a whole flock is allowed to run without killing off the old ones and replacing them by pullets, disease is sure to attack them. They are liable to become lazy and fat. If the plan of keeping only pullets that are early hatched is followed it is certain that no farmer will ever abandon it. A bad practice is that of allowing the fowls to become wild, so that they are afraid of any one, and hide their nests, and the few chickens they hatch lose their lives from want of food, care and shelter. Chickens hatched late in the summer and brought up in the fields by a wild mother are hardy; but this practice is not profitable, as the cost of wintering exceeds the summer returns. Summer chickens sometimes are more profitable than the very early ones, as they get a more varied diet, better exercise, and are healthier in every way. But fowls to be profitable must be kept tame. If, however, the chickens are to be grown for sale, for breeding or for show purposes it is necessary that they should be hatched as early in the season as possible, so that they may attain their full growth and feathering by fall.

THE PROGRESS IN POULTRY-KEEPING

Half a century ago poultry-keeping was simply a fashionable amusement and pastime. The beginning may be said to be about 1847 to 1850, at the time of the introduction of the Shanghais. Those who have some knowledge of the history of the past have a fair idea of what poultry has accomplished. The casual observer of years ago saw only enough of it to disgust him with the whole business. Men who were engaged in it saw enough money in it, and as many as had judgment enough to curtail expenses and reduce stock at the right time came out with a little money and more or less experience, the latter worth perhaps as much in the long run as the money. A great many so-called fanciers, however, went into the business merely for the sake of the speculation and excitement it afforded, and went out of it without knowing or caring anything about the ultimate results of the poultry interest at large. Fanciers of this type (and it is possible that there are a few of them in the business yet) were interested only in the proceeds, with no thought of what poultry-breeding has done for the improvement of the general stock of the country, and the increase of the products of the poultry-yards of the nation. There have always been some fanciers who were true fanciers—not speculators—who worked for nobler ends than merely to make money. The money end, of course, was not lost sight of, but it was not the governing purpose.

FEEDING OATS

Opinions differ among poultrymen as to the value of oats as feed. Some do not feed whole oats, and some make whole oats the principal part of their feed; yet oats are considered excellent to assist in a balanced ration. Occasionally some fowls will not eat oats if they are fed to them; but this is nothing against oats. It is a fact that at first fowls not accustomed to oats as a feed do not seem to like them, but later they may prefer oats above other grains. Hens that have been accustomed to eating oats have been deprived of them for a few days, and then both wheat and oats have been thrown to them, when they would eat

the oats before touching the other grain. Oats may be fed in any quantity to fowls without detriment, but should not be fed to hens when they have been so long without food that they are ravenous. In such cases they will pack their crops so full that the water subsequently taken will cause the oats to swell and so puncture the membrane that lines the crop. Birds have been killed in this way. Where hens have access to oats at all times they never eat enough at one time to bring on the trouble indicated. The fowls should be given an unlimited supply of grit and cut bone, to help grind the oats in the gizzard. Oats as a feed are a great help in the production of eggs.

THE WALLS AND FLOORS

The walls and floor of a poultry-house are sometimes problems. If tarred paper is used on the inside of the house it condenses moisture, because it is colder than the surrounding air of the poultry-house. The same happens to a cement floor. Dirt floors cannot be kept clean except by frequent renewal of the earth, while board floors become saturated with the fluids of the droppings, and also assist in providing harboring-places for rats. The cement floor is better than any except that it is very cold in winter and causes condensation of moisture. To protect the fowls such floors should be covered with an inch or two of clean dirt, and over the dirt the use of leaves or cut straw may be resorted to. This means a great deal of labor, but labor is essential to success in the poultry business.

LIME AND EGG-SHELLS

There are many hens that are in no manner provided with oyster-shells. It is true, however, that oyster-shells being sharp assist in grinding the food. Carbonate of lime is insoluble, and the lime for the egg-shells must consequently come from that which can be digested and conducted to the eggs through the blood. As nearly all kinds of food contain lime in a soluble form, by combination with vegetable acids, as well as in the form of inorganic salts that are soluble, the process of covering the eggs with shells goes on without the aid of substances that are insoluble. When a hen lays eggs with soft shells the cause is due not so much to lack of lime, but to the condition of the hen, as she is then, as a rule, in an overfat condition. To this cause may be traced all the eggs with soft shells.

INDICATIONS OF OVERFAT HENS

When a Leghorn hen weighs five and one half pounds, or even five pounds, she is fat; and when a Plymouth Rock hen gets up to eight pounds, or a Brahma reaches ten pounds, she is getting too fat. The best signs other than weighing them are their sluggish movement, their desire to wait for their food instead of scratching, broad appearance behind, falling of the belly (near or rear), especially with old hens, a smooth, glassy appearance—often red on the hind portion of the body—with perhaps loss of feathers. Body deep and a heavy appearance are also signs. One or all of these indications are to be observed; but the surest plan is to kill one supposed to be too fat, and she will show nearly the conditions of all the others in the flock if the food given has been heavily of grain.

ANIMAL-MEAL

The amount of animal-meal for chicks depends on their age. Take one pint each of bran and corn-meal, with one half pint of animal-meal, and feed twice a day, giving all they will eat up clean at a meal, and removing that which is unclean. If they have signs of bowel disease omit the animal-meal. It would be an advantage to feed it only once a

day, allowing cooked potatoes, chopped grass and a variety. There is no rule for quantity. Feed it as long as it does not injure them. Give the chicks millet-seed for one meal. Cook or scald the mixture of grain and animal-meal. Vary the diet with whole grains.

BAD MANAGEMENT

Many farmers never think about setting their hens until May or June, and the chicks hatched in these months are not so profitable as the early ones—that is, for broilers—and from under the hog-pen or barn will occasionally emerge a half-fed hen with three or four puny chicks, and from some other corner another may turn up; and so on until cold weather one after the other will incubate and bring forth cadaverous chicks without age and vigor, which, without care, are forced to struggle for existence, and if the vermin or rats have not taken them all by winter there may be a few to slaughter for Christmas. One will hear the farmer complaining at the grocery-store where he sells them that they cost him more than they have come to. Neglect or indifference will render the poultry business unprofitable quite as much as any other branch of business.

COLOR OF PLUMAGE

The inquiry is frequently made in regard to the superiority of certain varieties of a breed, such as whether Brown Leghorns are superior to the White or Buff varieties, or Barred Plymouth Rocks compared to those that are white. Color of plumage is a matter of preference only. There is no difference between the White and Barred Plymouth Rocks in laying qualities or hardiness. Some object to white birds because the plumage is more easily soiled, while birds of buff color seem to "show dirt" less. There is no advantage possessed by one kind over the other so far as color of plumage is concerned.

GUINEAS AS BUG-CATCHERS

My plan to fill the want of insect-eating birds is to raise guinea-fowls. I had a flock of fifteen, and in watching them travel (and they are travelers) I learned that what the first did not get those in the rear did. They have an eye like a robin. I have seen them turn their head a little sideways, as though looking wise, step six or eight feet away, and get the worm every time.

They are fond of potato-bugs, and will clean a patch better than Paris green. I believe a flock of a hundred will beat spraying all to pieces; and then the young, half-grown birds are as good for a fry as a prairie-chicken. The main trouble is to raise the young. I would set them under a common hen. She will beat the mother-guinea hen, who, while she will hatch twenty-five or more, will travel off and let them drop out one by one until they are all gone.—Western Fruit-Grower.

INQUIRIES ANSWERED

Prices of Broilers.—R. E. S., Tiffin, Ohio, writes: "At what period of the year do broilers bring the best prices?"

REPLY:—April and May; the highest the first week in May, with fair prices in June.

Large Eggs.—J. M. F., South Bend, Ind., writes: "One of my hens has been laying double-yolk eggs of extraordinary size. I am informed that there is some cause for the abnormally large eggs."

REPLY:—When a hen lays double-yolk eggs it is an indication that she is excessively fat.

Crossing Breeds.—J. G. S., Elmira, N. Y., writes: "I have a few Buff Cochins and Buff Leghorns, and wish to try a cross. Which male should I use—Buff Leghorn or Buff Cochin?"

REPLY:—The Buff Leghorn male should be preferred. There is nothing to gain by crossing breeds.

Breeding Flocks.—W. S. B., Marlon Centre, Pa., writes: "I have Golden Wyandottes, well mated, first cross. Would it be advisable to breed them one year without new blood? Define the term 'line' breeding."

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VETERINARY

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To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

A Tumor on a Cat.—L. M. D., Libertyville, Ill. Ask a veterinarian to remove the tumor by means of a surgical operation.

Periodical Ophthalmia.—W. J. N., Briughurst, Ind. What you describe is a case of periodical ophthalmia (so-called moon-blindness), and is incurable.

Probably Tuberculosis.—N. L., Trippville, Wis. Your meager description, so far as it goes, indicates tuberculosis. Have your cows examined by a competent veterinarian.

Bunches (?)—W. J. S., Kaneville, Ill. If the "bunches" you speak of are warts, as they probably are, please consult the numerous answers given to "wart" questions in recent issues of this paper.

Temporary Paralysis.—H. W., Toluca, Cal. Such a temporary paralysis as befell your cow immediately after calving is not a rare occurrence, and will disappear without any treatment beyond good care. It may possibly, but will not necessarily, occur again the next time your cow calves.

Scabs.—W. A. B., Beech Creek, Pa. Your mares evidently need better grooming, and perhaps better care in general, and less exposure to water, mud or filth. What you call scabs is probably the same thing as what is called "small lumps" by A. L. R. See answer headed "Skin Disease."

Probably Glanders.—J. H. M., Baldwin, Kansas. What you describe looks like, and probably is, a case of glanders. The best you can do is to inform your state veterinarian and to ask him to come and to examine your horse. Nasal gleet is simply a term used to signify a not fully developed case of glanders in which the most characteristic symptoms—the ulcers on the septum—are either not fully developed or situated too high and thus hidden from view.

Coughing Cows and Coughing Pigs.—D. T., Kirkersville, Ohio. If your cows, as you say, have been coughing for some time, are constantly getting worse, and at the same time are getting thinner, there is considerable cause for suspecting them of being affected with tuberculosis. It is, therefore, advisable to have them examined by a competent veterinarian, or still better, to have them subjected to the tuberculin test. Your young pigs most likely suffer from swine-plague, or so-called hog-cholera.

Three Cows Died.—W. J. C., Vigor, Va. As to the first cow, you would probably have found the cause of death if you had made a post-mortem examination of the uterus. The death of the other two cows very likely was a consequence of the cows having eaten too much fermenting and more or less indigestible food, as is indicated by the bloating and severe indigestion. Young and luxuriant clover, especially if wilted or consumed in considerable quantities while wet or covered with hoar-frost, would constitute a sufficient primary cause.

Warts.—J. P. H., Hood River, Oregon. If the wart at the end of a teat of your heifer has a neck, it is best removed by means of a ligature drawn as tightly as possible around that neck and as closely to the teat as it can be done. If it has no neck, it may, according to circumstances, be removed either by means of the surgical knife and caustics or by caustics alone; but whatever is done, it must be done only while the animal is dry and not when the same is in milk. As to the warts around the eye, the same will sooner or later disappear without any treatment.

Paralyzed Hound.—J. F. F., Vanclere, Ky. It may be that the partial, but rather extensive, paralysis of your fox-hound is a sequel of dog distemper, and if so there may be, as you state, a little improvement; but the prospect of ultimate recovery is exceedingly slim, and a perfect restoration to health must be regarded as out of the question, especially if the paralytic affection is already of long standing. It will be the cheapest and most satisfactory to dispose of the dog and to get a new one.

Skin Disease.—A. L. R., Chanute, Kan. If the "skin disease" of your horse is not too extensive—does not cover more than one fourth of the surface of the body—you may apply to the "small lumps" once a day for a few days in succession a mixture composed of liquid subacetate of lead, one part, and olive-oil, three parts, and after that keep the animal well groomed. If, however, the eruption should extend over more than one fourth of the surface of the body you must first limit the treatment to only one side, and attend to the other after the first has been cured and been properly groomed and freed from grease.

A Wart (?) on a Horse's Foot.—S. R. G., Winnemucca, Nevada. I very much doubt whether the morbid growth on the foot of your horse, and called by you a wart, is a wart. Give a description of it and I will answer you.

A Lamé Colt.—R. A. M., Cltronelle, Ala. Please study the article on spavin, ringbone and navicular disease in FARM AND FIRESIDE of December 1st issue, but especially what is said in regard to the diagnosis of spavin, and you will probably be able to make the diagnosis yourself.

One-sided Chronic Discharge from the Nose.—L. A. L., Seueca, Fla. Although a one-sided chronic discharge from the nose of a horse, unattended with any other morbid changes or symptoms of a serious character, may not be at all malignant, it must be looked upon as suspicious if the affected animal at the same time has a "dull-looking" coat of hair which is "dropping out," and is low-spirited, for in such a case it is evident that the one-sided discharge is caused by rather severe morbid changes affecting the vitality of the animal; and even the possibility of the discharge being a symptom of glanders is not excluded. I therefore most decidedly advise you to have the animal thoroughly examined by a competent person. Concerning the "lump," of the size of a walnut, on the outside of the left fore leg of the same animal I cannot give you any information, because some people apply the term "lump" to every elevation above and beneath the surface and to every swelling.

Tapeworms in a Dog.—J. W. S., Jerseyville, Ill. It is usually not very easy to free dogs from their tapeworms. Professor Zueru, one of the best authorities on animal parasites, highly recommends the areka-nut, a palm-fruit, and advises to take a fresh areka-nut, powder it (a pretty difficult job), mix the powder with butter and give it to the dog. If the latter refuses to take it voluntarily he advises to give it by force. The trouble is that but few retail druggists keep the areka-nut in stock, and if they do, it is usually an old "store-keeper," which is no good any more. The only way to get a good article is to induce a retail druggist to order one or a few fresh nuts from a reliable wholesale druggist. The dose for a small dog is about one and one half drams of the powdered nut. If the tapeworms do not pass off in about two hours after the medicine has been given a tablespoonful of castor-oil should follow.

Elephantiasis.—E. D., Marengo, Ill. What you describe appears to be a case of elephantiasis, and is incurable because the infiltrations of the connective tissues have become solid and hard and cannot any more be absorbed. Still such an animal may be able to do a great deal of slow work for a long time, and if the swelled legs are always kept scrupulously clean, and the animal is not used on muddy and slushy roads, etc., or if so used, only for a short time, and the legs are cleaned as soon as possible, there is usually not much danger of abscess formation, provided no abscesses, or cracks, are existing. If abscesses, or cracks, should be formed, they are best brought to healing by dressing them once a day either with iodoform or with a mixture composed of one part of liquid subacetate of lead and three parts of olive-oil. Which is to be given preference depends upon circumstances. As a rule iodoform is to be used on abscesses of an ulcerous character and extending into the subcutaneous tissues, while the mixture deserves preference where cracks have been formed.

So-called Pink-eye.—W. E. R., Fleming, Col. In so-called pink-eye, or in the infectious disease most frequently so-called by farmers, the morbid process may have its principal seat in various parts or organs of the body; consequently, as the cause—the infectious principle—after it has once invaded the organism cannot be removed the treatment must be a symptomatic one, and cannot be the same in every case. In most cases, especially if a veterinarian is not available, a good hygienic treatment is perfectly sufficient. First, the food must be such as the horse likes, and must be clean, sound and easy of digestion, and during the period of convalescence, when horses frequently show ravenous appetite, care must be had not to overfeed them. The water for drinking must be pure and fresh and neither be ice-cold nor lukewarm. Secondly, the air for breathing must be fresh and pure and free from any stable odor. If the horse is kept in a stable, the ventilation, without causing exposure to draft, must be perfect, and the temperature should neither be too high nor too low if there is any possibility of keeping it temperate. Thirdly, a horse affected with pink-eye (influenza) should never be kept in a crowded stable or in one occupied by many other horses, but if possible in a stable by itself or occupied by only a few horses, and that stable should be kept as clean as it is possible to do. If there is high fever, a few drams of saltpeter may be given in the water for drinking two or three times a day; but the quantity given should not exceed one ounce a day, although water always fresh may be offered five or six times a day, particularly in warm weather. Unless it can be superintended by a veterinarian any further medicinal treatment should be dispensed with.

Swallowed a Splinter of Wood.—C. E. D., Cumberland, Md. It is possible that the splinter of wood as large as a man's little finger will never cause any trouble, and even if there should be danger you would not be able to prevent it, because it cannot be removed even if it were known where it is. I do not apprehend any danger that it will ever form a nucleus of a stone or concrement. If there is any danger, it will be that it might get stuck in an intestine or wound the wall of one. When this reaches you if nothing has happened all danger will have passed.

Ascarides in Swine.—C. S., Elba, Neb. The worms of your pigs (Ascarides) may be expelled if you give each of your pigs about two drams of decorticated castor-beans mixed with the food daily for a few days, and then keep your pigs, especially in spring and summer, away from stagnant water and from low and wet places. But I have my doubts whether it is the worms alone that kill your pigs, or whether it is something else besides the worms. Make a careful post-mortem examination of the next one that dies, and report the result.

Swelled Legs—Spavin.—C. L. T., Peachtree, N. C. If there are no sores (so-called scratches) below, on or above the pastern-joints the swelling can be permanently reduced if you exercise the horse during the day, give the legs a good rubbing either with the hand or with a woolen rag at the close of the exercise, and then bandage the legs, beginning at the hoofs, with a bandage of woolen flannel, not to be removed until next morning, when the horse is to be exercised again. Before the exercise begins the legs should again receive a good rubbing with the hand or a woolen rag. This treatment must be continued day after day until no more swelling makes its appearance if the bandage is left off during the night. Concerning spavin please consult the December 1st issue of the FARM AND FIRESIDE.

Mare Throws Up Her Food Through the Nose.—S. H., Long Glade, Va. The ascertaining of the cause in such a case as yours, in which a nine-year-old mare discharges food through the nose, requires a careful examination, which none of your veterinarians seems to have made. There are three possibilities: First, it is possible that the soft palate, separating the nasal cavities from the cavity of the mouth and the fauces, has been destroyed by some morbid process. If this is the case food will be discharged through the nose only when the mare is eating. Secondly, it is possible that some obstruction or morbid growth is existing somewhere either in the pharynx, or in the esophagus anywhere between the pharynx and the stomach. In this case the mare will also discharge food through the nose when eating, but under much more distress than in the first-mentioned possibility. Thirdly, it is most likely that a diverticle of the esophagus somewhere between the pharynx and the stomach constitutes the cause, in which case the throwing up of the food through the nose would not be apt to take place when the mare is beginning to eat, but would commence as soon as the diverticle is full of food to such an extent as to close more or less the lumen (passage of the esophagus), and he invariably preceded by more or less distress and difficulty of breathing. In short, the mare would act a good deal like a horse that is choking. Such a diverticle, which might properly be called an esophageal hernia, is produced if, for instance, by forcing down too large a morsel the external muscular coat of the esophagus is ruptured, so that the internal coat, a mucous membrane, which is considerably wider than the external muscular coat, is bulging out through the rent, and thus forms a sac communicating with the interior of the esophagus. Then when the horse is eating, especially if a greedy or fast eater, the sac becomes filled with food and thus presses upon the esophagus. At first the sac as a rule is yet small, and comparatively little food will pass in, so that it will take some time before the sac becomes sufficiently filled to obstruct the passage; but the oftener the sac is filled the larger will become the rent in the muscular coat, and the larger will become the opening of the sac, and the larger the sac or diverticle itself, and the sooner will it become filled with food. Consequently, the older such a diverticle the more trouble will it cause and the severer the difficulty of breathing will be, and the sooner the discharge of the food through the nose will begin; while, since the sac is seldom or never completely emptied, the difficulty of breathing will be present in a greater or lesser degree all the time. As said above, such a diverticle may exist anywhere between the pharynx and the stomach, consequently just as well in the chest portion of the esophagus as in the neck portion of the same. If it is existing in the former there is no remedy, because there it is not accessible to a surgical operation; but if it is situated in the neck portion its presence cannot only be plainly felt and seen, especially after the horse has been eating awhile, but it is also accessible to a surgical operation, which is the only thing by which the difficulty can be removed. It will not be necessary to describe the operation, because it cannot be entrusted to anybody but a competent veterinarian, and he will not need any instruction.

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It is with pleasure we note the splendid service J. E. Wiug is doing the agricultural interests of the United States in his descriptions of the great stock-farms of America, printed in a popular stock journal. Mr. Wiug is especially happy in his descriptions. His imaginative powers, rare insight, combined with a boundless enthusiasm and faith in what is best in humanity, make his writings a source of joy and pleasure. His recent address before the Illinois Breeders' Association, "Three Good Things" (sunlight, fresh air, pure water), has been accorded lavish praise by the press of the country. Surely it is something to be a farmer! We have our Thoreaus and Emersons, did we but know it. It is the old, old story of plucky determination, stick-to-it-iveness and wide observation. How many of our young readers are there who are cultivating these qualities?

THE Thirty-fourth Annual Session of the National Grange, which convened at Washington, D. C., was one of marked interest and enthusiasm throughout. Worthy Master Aaron Jones, of Indiana, spoke of the increasing prosperity of the order, and renewed the suggestions for legislation made last year.

The National Lecturer, N. J. Bachelder, told of the work in his department, and noted the increased interest the organized farmers were taking in the educational work.

The state masters all made mention of a gratifying increase in numbers.

Special emphasis was laid on the fact that the granges in the various states were paying marked attention to the educational features of the order.

State Master Geo. B. Horton, of Michigan, reported ninety-three granges organized during the year, with prospects good for reaching the hundred-mark.

State Master S. H. Ellis, of Ohio, a veteran in grange work, who has represented Ohio for fourteen years in the National Grange, said that the number of members had doubled in the last ten years, and he confidently expected we would soon have one hundred thousand marching under our banners.

State Master E. B. Norris, of New York, reported nine hundred granges in his state.

The report of the Treasurer, Mrs. Eva S. McDowell, showed available funds of over \$57,000. Mrs. McDowell is the second treasurer of the National Grange. Her husband, one of the founders of the order, was the first.

O. H. Kelley, of Florida, one of the founders of the order, was present, and delivered a delightful address full of reminiscences and cheer and hope for the future. He was enthusiastically greeted by the Patrons.

J. H. Brigham, Past National Master, and at present Assistant Secretary of Agriculture, delivered several strong addresses. He was untiring in his efforts to render the visiting delegates and members every attention possible.

Secretary of Agriculture Wilson addressed the grange at length. The very practical and efficient service his department is rendering the farmer was highly eulogized by the grange. It may not be out of place here to mention that the Iowa dairymen emphatically recognized the splendid services of Mr. Wilson, and urged that he be retained in the cabinet. We are glad to note that President McKinley has asked him to remain. Secretary Wilson has added grace and dignity to the Agricultural Department. He is making of it what it was originally intended to be—a real help to the farmer.

The grange visited the White House, and those who had not previously met President McKinley were introduced to him. The grange also visited Mount Vernon and the Agricultural Department.

Dr. Geo. Austen Bowen, of Connecticut, Worthy High Priest of Demeter, attended by his court, conferred the beautiful and impressive seventh degree on a class of one hundred and eighteen members. Dr. Bowen has spent a great deal of time and money in perfecting the work of this degree. The result is fully commensurate with the labor expended. Patrons should be proud of the fact that no other order has ritualistic work more beautiful and sublime, a regalia more classically correct, than has the degree of Ceres. This, the highest degree, is typical of that which is possible to every farmer in our land—the highest, noblest and best mental and spiritual development.

The memorial services Sunday afternoon were impressive. Those who died during the year were Isabel B. Carr, of Wisconsin; Virginia C. Aiken, of South Carolina; S. M. Rose, of Texas; J. M. Blanton, of Virginia, and William Saunders, of Washington, D. C., the latter one of the seven founders of the order, and its first national master.

The next session of the National Grange will be held in Portland, Maine.

There were many interesting features that we would be glad to report did space permit. The proceedings will be printed, and those interested may obtain copies as soon as issued by writing to the state master or secretary of the state in which they reside, and of N. J. Bachelder, National Lecturer, Concord, N. H. The one point more emphasized than all others was the importance of the educational work. This augurs well for the farmer. There can be no permanent good without a broad and liberal education. We may organize indefinitely for self-protection—it is our highest duty to do so—but with organization must come improvement and a wider knowledge, else we will defeat our own aims.

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CHRISTMAS, THE BLESSED HOLIDAY

By Adele K. Johnson

"LD Christmas still comes once a year." Brave hearts and clever fingers are earnestly working to make this the happiest day of the year, the precious memory of which will be cherished gratefully until another glad season of love and cheer greets us.

A handsome, warm, crocheted petticoat would surely please a small maiden. An attractive gift for a young girl is a knitted boa. It has a fluffy, dainty look. Crocheted knee-caps give excellent service. The boys' knitted muffler and mittens are very practical. The muffler is first made, then the mittens are attached to this by long, knitted bands.

A little sewing-basket completely furnished is a desirable remembrance. Prettily dressed dolls always find a welcome. Cloth animals afford great happiness.

The "smile box" is decidedly novel. A pasteboard box is covered with red, white and blue paper, and on the top is a picture of Santa Claus holding a card on which is this verse:

"If I knew the box where the smiles are kept,
No matter how large the key
Or strong the bolt, I would try so hard,
'Twould open, I know, for me."

A large metal key is fastened on one side.

Two new scrap-books will surely prove interesting. The cover, of green linen, has "A Merry Christmas" in gilt and graceful festoons of holly. Within several pictures from current magazines illustrate cats and kittens. Here are "The Fish Commissioners," "A Society Lion," "The White Pomeranians," "Master Buttons," "Dinner-time," etc. The second also has holly and an American flag for decorations. Its title is "The United States Volunteers," and contains the familiar pictures of two little boys in their night-clothes practising tactics, from "shoulder arms" to "veille," and "The Bivouac," when tired out—they had fallen asleep!

A baby-blanket knitted thirty inches wide and a yard long is considered very useful. Dainty is a challis coverlet bound and tied with ribbons. Handsome additions to a little child's wardrobe are the collars to wear with jackets and coats. These are developed in white pique, with frills of wide embroidery; some of the collars have rounded corners, others a square outline. A quaint little nainsook dress for a baby shows the popular short waist. The round yoke is finished with a berth (embroidery), whose deep outline is pointed at the bottom.

One of the newest pincushions is oblong in style, with a cover of white blue-flowered muslin over blue silk completed with a wide muslin frill. At each corner and in the center of each side is a large rosette of black velvet baby ribbon.

The woman who is skilful with a crochet-hook has a desirable resource at holiday-time. Very dainty are the dollies of fine white linen with the border crocheted directly into the edge. Pretty fascinators and shawls are also delightful gifts.

A scrap-basket is of pasteboard covered with cretonne. The four panels are oblong, narrower at the bottom than at the top, and are tied together at each corner, both top and bottom, and in the center with a narrow satin ribbon bow.

A familiar friend is the regulation-sized mail-bag of russet-brown canvas lined with blue denim. The bottom consists of an oblong-shaped piece of heavy cardboard neatly covered with canvas, while the sides are soft, and the joining-seams at one side and between the bottom and sides are ornamented with a row of evenly spaced brass-headed tacks. "United States" is painted in black letters on the front. The flap is made to fasten like the original, with leather or a ribbon to suspend it by. This is utilized for a laundry-bag.

Small and round is a white and yellow

basket which has a white lace ruffle over one of yellow silk at the top. A large maple-leaf is embroidered on the white linen cover.

A practical head-rest and a floor-cushion will certainly bring comfort and happiness to an aged person.

A twine-bag crocheted of silk is convenient. The balls of fancy-colored twine cost only ten cents. A box for letter-paper is oblong; wide, green ribbon prettily covers the sides, with a graceful full bow at one end. On the white linen cover a large red rose is exquisitely embroidered.

Calendars are of many fashions. Water-color paper, chamois, linen, silk and velvet are all used, over stiff cardboard. They may be round, heart, oblong or diamond shaped, painted or embroidered with flowers or mottoes, and decorated with ribbons, cord or blue-prints. One has a clever little charcoal sketch of a group of three small, bright Italian newsboys, "Tony, Angel and Raph." Another has photographs of scenes in the maker's picturesque little village. A man's calendar must be substantial.

A camera devotee has effectively decorated book-covers and blotters with blue-prints. "How to Know the Ferns," by Mrs. Wm. Starr Dana, has a cover of yellow chamois, on which several fern-fronds are realistically embroidered.

Unmounted photographs of historic buildings, noted monuments, famous scenes and portraits of celebrated people are inexpensive and artistic. Simple home-made frames are often very successful. Old-fashioned black wooden frames with patience and skill may become delightful Christmas gifts by means of enamel, gold or silver paint. Dark frames are the most fashionable, with mats of the same color or none at all. Narrow gold frames are attractive and desirable for etchings.

To-day the decorations should harmonize with the portrait within. A round photograph-frame has the blue linen embroidered with valley-lilies, and incloses a dear baby's face. Christmas lilies and white roses—signifying plenty—may be chosen for a beloved saint's picture.

CHRISTMAS SUGGESTION OF PRACTICAL IMPORT

"Be just before you are generous" should be the warning greatest heeded. And to home finance should the giver of Christmas gifts turn with careful thought and calculation before she has dipped into the family purse with a lavish or too generous hand. The prudent wife is ever just to the inmates of her household, and soulfully loyal to her husband, and tolerates no extravagance even in gift-giving. Yet she has learned the vast difference between generosity and selfishness.

Half the pleasure in giving gifts comes from the pleasure of having cost no money and time or even a self-denial. The gift that represents one's handiwork and labor carries with it a real bit of one's self. And to the real friend this always brings a value of intrinsic worth.

Our Master celebrated the day of his birth feeding the hungry and healing the sick and giving consolation to those who wept and were sorrowful. As great need exists to-day as in the days of Christ's reign on earth for the extending of all such deeds of love and charity. If we but look about us, heart-work of all such character lies close at hand, waiting only our thought and our action to bring the Christmas cheer where for long it has never been known. And yet how very few remember. One dear giver of gifts lies this holiday-time with folded hands, and the widows whose bins were filled with a winter's supply of coal must look to another source for the help that came so timely to them when winter's demands made such strident inroads upon their scant earnings. But the gifts of the past will never be forgotten. Let this suggestion be fuel for

the widowed and fatherless, whose means are as scant and whose needs are as many as our own. Food and fire and warm clothing are the necessities of life. To be practical, then, in gift-giving, helping the helpless to days of comfort would be one among the many ways of dispensing God's manner of gift offerings in a gracious and graceful giving.

Speaking of Christmas gifts and giving one day in midsummer, a housewife friend, who lives in the village, suggested that the giving of a golden roll of fresh, sweet butter from the farm wife to her city or village friends made a most acceptable gift, and one that was sure to be highly appreciated. It is practical, surely, and comes within the province of her who presides over the dairy department of the farm. And likewise from the farm comes many things that would scarcely be missed, but that would be much appreciated by friends whose hands must go down into the purse whenever an article of any kind is needed.

It is a pleasant and worthy work of summer-time for a housewife of some means to be planning and making warm bedding for those who are worthy but poor. It is the happiest pastime imaginable, and one's very love goes out to the coming recipient as the stitches take form and as bits and pieces are thus woven into so available a form. A few pounds of cotton and a few hours of time, and the housewife's work and time are converted into the most substantial and acceptable gifts to families where poverty predominates. Plenty of warm bedding is rare among the very poor. Strive to make some one family comfortable in bedding, and as a reward a gracious Christmas-gift giving will have followed your efforts. And far more worthily, too, will your gifts have been bestowed than had the money been expended in some exquisite piece of china or silver or other dainty thing for a friend who knows nothing of need.

A little "shut-in" friend of mine was the happy recipient of an oddly chosen Christmas gift two seasons ago. The postman brought to her door on Christmas morning a queer-looking envelop. It was devoid of postmark (the donor had evidently connived with the postmaster in withholding that mark from the envelop), and it appeared bulky, though very light in weight. The address had been written with a type-writer—no tell-tale hand-writing to "give the secret away"—and to this day the secret remains one. Upon opening this letter there fell out into the lap of the invalid two dollars' worth of two-cent postage-stamps.

Tears filled her eyes. "Some one loves me who is able to grant me that desire of my heart that is always prompting me to write letters to stranger friends who are afflicted as I," she said. "Who can it be? If only I could thank her! No one knows what happiness it is to me to be able now to write one hundred letters. And what letters they shall be! I will give to those who receive them the best of myself. I will breathe into them the very happiest thoughts of which I am capable, and I will make others happy if possible, as I have been made happy."

This invalid friend loved, above all other little things that she could do, to write those cheerful, loving letters that all "shut-in" people so much enjoy from the outside world, and she longed to reach farther into the world of loneliness such as she herself knew so well the meaning of. But stamps, though but two cents each, were not plentiful, and those upon whom she was dependent for support found more ways for pennies than there were of forthcoming pennies to meet the needs. Her own expenses were heavy, for there had been heavy bills presented by physicians and surgeons and nurses, and to "be just before generous" was the law of her heart. She would not even ask for stamps and stationery. What a "gift from heaven" it was, then, that envelop filled with postage-stamps. Doubtless the donor made no more graceful or graciously given gift in all his (or her) life of gift-giving before. Others, upon seeing her delight over the prospect of letter-writing before her, added to her Christmas gifts of stationery and envelopes in quantity;

so much of it that she was enabled to write as lengthy letters as she chose, and as bulkily filled ones as Uncle Sam would carry for her at two cents. In your home and mine it may not be that

"Each room with ivy-leaves is drest,
And every post with holly."

But the home may be resplendent in some loved manner of demonstration and dressing suited to the occasion. Greenery and a few flowers make bright and cheery the rooms, and bits of green and floral colors give a very taste of summer-time to the white-spread table, and make the simplest viands take on an added flavor.

With all the rest we shall naturally remember "our own" with gifts and smiles and greetings. To our nearest and dearest we feel that we can find nothing too good that comes within our means. But let us strike from our hearts and minds the thought that suggests giving "because we must" or because some one has given to us. Gifts that are given as duty-presents and to "pay back" are gifts that are almost a heart crime. Let the gifts be of a heart-giving nature, else better no gift at all.

ELLA HOUGHTON.

CHRISTMAS HINTS FOR TARDY ONES

Despite our best resolves and endeavors the week before Christmas is almost sure to be filled with hurry and worry over belated gifts. Descriptions of a few quickly made and dainty gifts that have been devised for just this emergency are here given:

PAPER-WEIGHT.—With the best of intentions desk-fittments are often a delusion and a snare, but a paper-weight that means business, and is at the same time artistic, convenient and serviceable, may be made from a small-size silver call-bell. Have the date and some fitting sentiment engraved upon the sides; invert and fix firmly in position, fill with plaster of Paris moistened with cold water, and when it hardens reverse the bell, tie a bit of pretty satin ribbon around the lower part of the handle, and sew loops to position.

BONBON-HOLDERS.—Candy can be easily made at home in so many attractive ways that pretty receptacles for it are more than ever appreciated. The little Japanese splint-baskets that can be purchased by the dozen for a trifling sum may be easily transformed into the daintiest bonbon-holders imaginable. Simply give two coats of ivory-white or other delicate tint of enamel, and when dry touch up the edges and high-lights with gold paint. Filled with holly, mistletoe or laurel they are a very charming little reminder of one's good-will.

FOR CHRISTMAS SWEETS.—The often quaintly decorated little Japanese or Chinese china cups and saucers may be utilized for the foundation of two pretty gifts; namely, a candy-holder and a pincushion. For the former cut a square of paraffin-paper two thirds as large as a Japanese paper napkin; place wax paper and the saucer in the center of the napkin and fill the saucer with candy; gather up the napkin in tiny plaits, commencing near the outer edge at the center of side, bring the plaits together, tie in a long-looped bow with white baby ribbon and pull the corners of the napkin out evenly. If preferred crape-paper can be substituted for the napkin.

DAINTY PINCUSHION.—Cut a circle of stiff cardboard to fit inside of the cup three fourths of an inch below the top; make a round cushion over one side of the cardboard, cover with delicately tinted silk, and add a frill of narrow Valenciennes lace around the edge; moisten the edges of the cardboard with glue, press into the cup, and when dry ornament the handle with a bow and short ends of narrow satin ribbon.

CAPE-PAPER SACHETS.—Make a ball of fluffy cotton as large as an orange, and fill it with sachet-powder. Cut two circles of crape-paper—one white, the other colored; slash edges for fringe, and crinkle with the hands; lay together, white circle uppermost, place the ball in the center, plait the edges, bring together and hold in place by tying with tassel-tipped silk cord.

KATHERINE B. JOHNSON.

SOMETHING FOR BABY

Hang up the baby's stocking,
Be sure and don't forget,
The dear little dimpled darling!
She never saw Christmas yet;
But I've told her all about it,
And she opened her big blue eyes,
And I'm sure she understands it,
She looks so funny and wise.

Dear! what a tiny stocking!
It doesn't take much to hold
Such little pink toes as baby's
Away from frost and cold.
But then, for the baby's Christmas
It will never do at all,
Why, Santa wouldn't be looking
For anything half so small!

I know what we'll do for the baby,
I've thought of the very best plan,
I'll borrow a stocking of grandma—
The longest that ever I saw;
And you'll hang it by mine, dear mother,
Right here in the corner, so,
And write a letter to Santa,
And fasten it onto the toe.

Write, "This is the baby's stocking,
That hangs in the corner here;
You never have seen her, Santa,
For she only came this year;
But she's just the blissest baby!
And now, before you go,
Just cram her stocking with goodies,
From the top cleau down to the toe."

CHRISTMAS DAY

WHILE Christmas is essentially a Christian holiday, yet coming as it does at the same season of the year when the pagan world was wont to celebrate the winter solstice, many of their ceremonies were used in the ancient Christmas festivities. The Roman Saturnalia, a festival held in December, was a time of unrestrained license and merriment. In the earliest accounts we have of Christmas day the festivities were rough games and riotous feasting.

The use of holly and other evergreens for decoration at this time dates back to the founding of the Saturnalia, as the plant was then dedicated to Saturn, and is said to have been regarded as an emblem of peace and good-will. It is doubtless from this custom and its significance that the early Christians, when they commenced to celebrate the birth of Christ, decorated their homes and places of worship with branches of holly. The English word "holly" comes from the use of the tree at this holy season.

Because this custom of decorating with evergreens comes from a pagan source is no reason why Christians should not use it. When winter, with frost and snow, reigns out of doors it adds to the indoor cheer to brighten the rooms with festoons and wreaths of evergreen and bright red berries. If an open fireplace is available, bring in the Yule log, which is simply an extra large log of hard wood, and have a roaring fire. It used to be the custom to have large decorated candles to burn on Christmas eve. These were frequently made to branch into three candles at about the middle of their height. Instead of these an abundance of pretty candles of various colors are now used to light the dining-room on Christmas eve.

After all the decorating and beautifying, if the true Christmas spirit is not in the heart the one thing needful to bring joy and happiness will be lacking. The delight of this season is the spirit of loving kindness which the Yule fire and the light typify, and which reaches out far into the darkness and cold and cheers all within its reach.

Christmas seems to be the one festival of the year which rightfully belongs to the children—the time when the Christ-child came into the world, born in such a lowly place, that no child, however humble, but should share in the joy of his birth. If we have children in our homes, let us invest the Christmas-time with all the beauty and brightness that is possible. Teach them the sweet old Christmas songs, such as "Holy Night," "Once in Royal David's City," "O Little Town of Bethlehem" and "Joy to the World." Tell them again the story of the birth of the Christ. All children love it, and it is ever new. These talks are made more interesting by looking at pictures. Good copies of old masterpieces illus-

trating the life of Christ are very cheap now, and should be in every home. Such pictures as Correggio's "Nativity," "The Worship of the Magi," "The Madonna and Child," will make a lasting impression on a child's mind.

As Christmas commemorates God's greatest and best gift to the world, it is a sweet custom for friends to give some gift to each other symbolizing their love. In too many homes the children are in danger of having their only idea of Christmas one of getting something, instead of sharing in the joy of giving. In this way they lose the best part of the Christmas joy. Be sure to let even the little ones have a share in the Christmas preparation; teach them that the best part of every gift is the love that goes with it, and to try to make a happy Christmas for as many as they can. It would be a good thing if all children would commit to memory these lines, by Phoebe Carey, and practise them:

Children whose lives are blest with love untold,
Whose gifts are greater than your arms can hold,
Think of the child who stands
To-day with empty hand!

Go fill them up and you will also fill
Their empty hearts, that he so cold and still,
And brighten long-lug eyes
With grateful, glad surprise.

May all who have at this hlest season seek
His precious little ones—the poor and weak;
In joyful, sweet accord,
Thus lending to the Lord!

MAIDA McL.

OUR GIRLS

We are continually hearing the question "What shall be done to save the boys?" but we seldom hear it asked in regard to the girls. In our anxiety for the boys we sometimes forget the rights of these dear girls. What a responsibility rests upon them! They are to become the mothers of the future generations. Too much care cannot be taken to train them for these responsibilities.

Do not let them grow up in ignorance of those facts that they should know. Who can talk better to a girl than her own mother? But, strange as it may seem, we know some mothers are as averse to talking to their daughters as they are to their sons; when that is the case some good friend can do much in this regard.

I know young ladies and older women in Denver who have "clubs" for these girls. They have regular meetings for them, come into heart-to-heart contact with them, and tell them the things that their mothers fail to tell them. The good that such a society will do cannot be estimated.

High-school teachers, as well as Sunday-school teachers, can do a great deal to help the girls under their care. Young ladies of sixteen and seventeen love to talk soberly, sensibly and trustfully to a sympathetic friend older than themselves.

Young ladies, you have a responsibility second to none other. There is no neutral, unconscious state into which you may fall and be free from it. Do not flatter yourself that you have no influence. While traveling through Switzerland I saw the wonderful mountain the Jung Frau, or "Young Woman." I can never forget how prominently, yet with seeming modesty, it stands out from the rest of the range. There is a beautiful significance in it to me. Where in all the range of human life can the counterpart to the young women be found? I have seen these words in some of my readings: "Show me the young ladies in a community and I will show you the young men." Girls, is this true? Do you determine the character of the young men in your community?

I believe in you, young women; believe in the purposes of your hearts, in the purity of your intentions. I know that it is possible for you to look out with chaste eyes upon the world, and to shed abroad a silent influence for good. It is possible for you to live a life so noble and womanly that all who know you will desire to be better. You can live a life so pure that the unchaste word, the suggestive speech, cannot be uttered in your presence. Be

a Jung Frau (a guiding star) to all with whom you come in contact.

You are standing upon life's threshold; your feet shall soon stand within the gates of the greatest century that has ever passed over our earth! There are wonderful possibilities before you; do not allow the many, many things that tend to claim your attention draw you aside from the thought of your responsibility. Use your talents; Nature withdraws her gifts from him who neglects or misuses them. There is no grace of mind or heart that remains unurgd. Life is use; neglect is death. The highest, sweetest happiness of life is not found in doing and thinking for self, but in what we do for others, forgetting self!

ELLA BARTLETT SIMMONS.

THE USE OF PORK

PORK PIE.—From the trimmings of the joints a delightful steamed pork pie can be made this way: Make a paste with one pint of flour, two tablespoonfuls of pork-drippings, one half teaspoonful of soda, one teaspoonful of cream of tartar, a pinch of salt, and moisten with enough milk to roll out. Rub the drippings into the flour, put in the soda, salt and cream of tartar, then stir in the milk, and roll out immediately. The excellence of this paste depends on its being made quickly and not allowed to stand. Have ready boiled and cold the pieces of pork cut into slices a quarter of an inch thick, five or six raw potatoes cut into very thin slices, and one small onion shredded fine. Lay these in alternate layers until the dish is full; sprinkle lightly with salt and pepper. Bring the paste together over the top, and steam over a pot of boiling water for two hours and fifteen minutes. If the flavor of summer savory, sage or sweet marjoram is liked it can be added.

PORK POT-PIE.—Three pounds of fresh pork cut into inch cubes. Fry brown, add one teaspoonful each of chopped sage, thyme and parsley. Cover with three pints of water, and boil for two hours; add a pinch of cayenne and one tablespoonful of salt. Add also three pints of sliced vegetables—carrots, onions and potatoes. Boil half an hour longer, then put in one pint of rich sweet milk and one tablespoonful of butter rolled in flour; when it boils up again add the dumplings. The dumplings are made of one pint of flour, one teaspoonful of salt and one teaspoonful of baking-powder sifted together; add two well-beaten eggs and one cupful of milk; beat out all the lumps, and drop by spoonfuls into the stew.

QUAIL AND PORK PIE.—Clean and dress the birds, loosen the joints, but do not divide them. Put on the stove with their equal in weight of fresh pork, to slowly simmer, while you make a rich paste. Cover a deep dish with it, then lay in the bottom some of the par-boiled pork finely shredded, then a layer of hard-boiled eggs, a little butter and pepper. Sprinkle the birds with pepper and minced parsley. Put a few lumps of butter rolled in flour on their breasts, pour in a little of the stock in which the quails and pork were par-boiled, and put on the pastry top. Leave a slit in the middle of the crust, and bake one hour. A short time before taking from the oven add the rest of the stock.

RABBIT AND PORK PIE.—Cut a pair of rabbits into pieces, and soak in salt-water one hour; then simmer in enough water to cover until half done. Cut one pound of fresh pork into slices, and hard-boil four eggs. Lay some pieces of the pork in the bottom of the dish, next a layer of rabbit; upon this lay slices of hard-boiled eggs, and pepper and butter and sprinkle with a little powdered mace. Proceed thus until the dish is full, the top layer being pork. Pour in the stock, add a few lumps of butter rolled in flour, cover with pastry half an inch thick, and bake one hour.

MRS. W. L. TABOR.

THE OLD FOLKS AT CHRISTMAS

Too much stress is put upon the fact that the children must have a good time at Christmas. Let me suggest that you do not forget the old folks. They do not always enjoy practical things, and perhaps are beyond caring

for housekeeping things. I know of one old lady eighty years of age who delights in showing her callers a beautiful opal and diamond ring which a grandnephew gave her on her last birthday. There is nothing she can do, with her failing sight, and I thought it was a beautiful thing for him to be able to do and to think of doing, that she might have it as a bauble with which to amuse herself.

The beautiful Newport scarfs, made of Sletland floss, knit with the thread doubled, in plain garter-knitting, on large needles, of either white or lavender, make a nice gift to an old lady. Avoid black articles of every kind. Why an old lady should ever wear black when she has become confined to the house I do not understand. Gray for winter and white for summer are so much prettier. Dainty, soft slippers and silk stockings are other acceptable gifts. If the stockings are hand-knitted, of gray silk with white feet, they will be much nicer. Half a dozen white China-silk caps—made either in tucks or plain—trimmed with ruches and narrow white satin ties would delight many old ladies' hearts.

The finest of handkerchiefs always appeal to every one; and if they can read—if the dear old eyes are not too dim—a testament in very large print, or some other book that is pleasant to read, will be a comfort.

Sometimes a generous supply of dainty toilet articles, perfumes and ointments would appeal to some, or a lavish supply for the work-basket.

Strange to say, many are very fond of candy. I have heard several old ladies say they craved candy as they never did when they were young. But let it be of the soft kinds and of the very best.

If grandma is the family letter-writer, see that she has plenty of stationery and stamps for a long time to come. Let your thoughts for them be of the fondest, as the days of their stay may not be long.

B. K.

WHAT HAS BEEN SAID OF THE HOME-LIFE

There is probably no other subject in the world about which there has been so much sentiment as home. The sweetest poets have sung its delights; the finest oratory has laid the fairest garlands upon its altars. There is no fancy so dull it does not picture a place where the weary heart may find peace and rest, and where love binds up the wounds the world has dealt.

It is the ideal home of which every man dreams and in which every true woman hopes to reign some day as queen. So far as the outward signs go many achieve their desire. But if "stone walls do not a prison make, or iron bars a cage," still less does the mere possession of a house make a real home. It may be beautiful within and without, rich in art treasures and costly bric-a-brac; yet if consideration and forbearance and love and patience do not furnish it, it is as lacking in the essential attributes of a true home as the bare stones in the street.

"Shall I not take mine ease in mine inn?" asks bluff Sir John. "Shall I not take mine ease in mine own house?" we ask. "Shall I not there be free from prying eyes, and at liberty to do even as it pleases me?" Only too many of us roughly translate this to mean that we feel at perfect liberty to make our homes a dumping-ground for all our bad temper and irritability, and the boorishness that we would not dare to inflict on the outside world. Far too many leave their good manners with their top-coats and umbrellas, in the front hall. They never get much beyond the threshold.

It is a strange and very pathetic fact that we give our best to strangers and chance acquaintances, and keep for our nearest and dearest only what is left of our brightness and amiability. A man has had a worrying day in business, perhaps. He has not dared to be rude to Smith, who has the letting of a big contract, nor to Jones, from whom he wants to borrow money; but when he gets home he "takes it out" on his family. Or the wife oppressed by cares makes the home a vent for bad temper and irritability.

S. W. HUMPHREYS.

[HOUSEHOLD CONCLUDED ON PAGE 19]

AN ALABAMA YANKEE

By Francis Lynde

CHAPTER V.

A GENEROUS ENEMY

It is said that misfortunes are like drugs; some of them medicines, to heal and stimulate, while others are poisons, to benumb and paralyze. When Alan saw the wreck and the fire imagination added all the other horrors, and the world went black and became a huge spinning-peg top with a misery-sick boy for its axis.

Now, the cure of horror-sickness lies in action administered promptly and in heroic doses; and luckily there was plenty to do. Wherefore, he came alive with a shock that tingled, and darted into the dismantled house. It was a blessed relief to find it empty. There was room for the hope that the others had escaped with life, at least.

A stifling minute later he had found the fire. It had evidently been a hurried afterthought with the marauders, and had been started by the simple process of ripping open and firing a straw bed-tick in Mary's room.

It was young as yet, with more smoke than flame, and Alan lost no time. There was a rain-barrel under the kitchen eaves, and it was full. But it took no more than half a dozen rounds from the fire to the barrel and back again to prove that the carry was too long.

"Pity's sake! It's going to burn in spite of me!" he gasped, backing out of the smoke for another dash. "If I only had somebody to pass the buckets through the window to me!"

For the second time that day his wish seemed to call up its own fulfillment. While he was dipping the buckets again he saw a girl running up the path; a girl with her hair flying loose and her sunbonnet hanging at her back.

Alan had always maintained that Eleanor Garth was the prettiest girl on the mountain—echoing his brother's eulogy of her—but just now she appeared as a veritable angel of light.

"Oh, Ellie! I'm so glad!" he hurst out, quite forgetting the family feud in the stress of the moment. "You're just in time! Fill these buckets and pass 'em through the window to me, quick!"

She went to work instantly and without a word, just as if that were what she had come for; and the shortening of the water-carry and the added pair of bauds saved the bouse from destruction.

With the lessening strain Alan began to grow miserable again. Believing that the raid and all its desolating consequences were chargeable to Jasper Garth, it was humiliating to admit that but for Jasper Garth's daughter the fire would have conquered him.

Also, there was the knowledge of Jasper Garth's fate clogging him like the leaden-soled shoes of a diver. Eleanor did not know, and she ought to be told. And yet he felt that he would rather fight Seth Byers and his entire following single-handed than to be the one to tell her.

"That's enough; it's all out now," he said, when the final embers had been safely deluged. "How in the world did you happen to come just in the nick of time?"

Eleanor was drying her arms and pulling down her sleeves. She, too, was under the ban of the family estrangement, and was trying hard to ignore it.

"I had been down to the Morecombs' to see if I couldn't get Mrs. Morecomb and Sue to come up and stay with us. They're alone, you know, and so are we. I saw the smoke, and thought maybe you-all were in trouble."

Alan looked her straight in the eyes and tried to harden his heart.

"I should think that would have made you go on by."

She looked away from him, busying herself with the knot in the sunbonnet-strings.

"It seems to me we oughtn't to remember those things at such a time as this."

But Alan had to remember them or else be broken on the wheel of remorse. So he said, "Your father doesn't forget."

She turned on him quickly. "My father? You can't say that it's all his fault, Alan."

"I don't know whose fault it was at first; it doesn't make much difference about that. But I do know we have him to thank for this raid."

He hoped it would make her angry; that she would strike back hard enough to make it possible for him to say what had to be said. But instead she put her hands on his shoulders as his mother might.

"You don't know what you're saying, Alan! Why, it's simply horrible!"

"It's true," he insisted, stubbornly. "Everybody knows be's good friends with Seth Byers."

She turned away and left him at that, as her father's daughter should. Alan followed her to the orchard gate, keeping a respectful distance behind her and feeling more measurably miserable than ever.

The gate stopped her because the hot tears made the latch invisible; and Alan overtook her and opened it. In the road he plodded doggedly along beside her, and when she turned on him with an indignant protest his answer was of boyish bluntness.

"You've no business to be out alone these times. I'm going to take you home."

"You'd better go back and look for your own folks. How do you know what has become of them?"

"They're in a safe place," he said, with a better show of confidence than the facts warranted or than he really felt.

After that there was half a mile of tingling silence, in which Alan sought helplessly for words in which to tell the terrible news, and found them not, for all the seeking. As he was leaving her at her own gate Eleanor stopped him.

"Wait a minute. You said a little while ago that father and Seth Byers were good friends. Do you know what happened to us night before last?"



"You don't know what you're saying, Alan!"

Alan nodded. "I know you had a lot of company. I was by here."

"It wasn't company; it was a raid! They made us all get up at two o'clock in the morning and cook for them. And when they went away they ran off every able-bodied negro on the place, and every hoof of stock we had!"

"Wha—what! Why, I thought sure—"

"Sometimes it's only common charity to think twice," she retorted; and with that she left him.

Although he knew it not, Alan had cause to be thankful that he came of the sturdy old Covenanter stock in which sanity is a constant quantity. Otherwise the knowledge of what he had done might have wrecked him. He did not doubt Eleanor's word. What she had said was true. It was his enmity which had kept him from so much as suspecting the truth.

It all came to him like a flash. If he had seen the guerrillas at any other bouse in the neighborhood he would never have thought of calling it anything but a raid. But because it was the Garth place and Jasper Garth was the family enemy—

Alan was far down the road, running as he had never run before, when remorse let

fly this final dart. To find his father; to beg him to go to the rescue; to undo by any means the awful thing he had done in bearing false witness against Jasper Garth; these were the whip-lashes that flogged him on, faster and still faster.

Coming to the orchard gate, he snatched it open and fairly flew up the path. There was a light in the kitchen, and he thought the fire had gotten alive again. It was not a fire; it was a candle in its place on the chimney-shelf—a candle lighted by his father. Alan gave a great gulp of relief.

"Oh, goodness, but I'm glad!" he panted, when he could find breath for the words. "Where's mother—and Mary?"

Stephen Joyce was sitting with his head in his hands, and when he looked up Alan saw that his face was blackened and smoke-he-grimed.

"They are safe in the crevice, I hope, lad-die. What has happened?"

"Why, don't you know? We've been raided!"

Joyce passed his hands over his eyes and stared hard at the candle.

"I can't see very well," he said. "Is that candle burning all right?"

Alan sprang to his feet, forgetting his own troubles. "Father, you're hurt! What have they done to you?"

"I'm just beginning to remember. After you left we had another warning, from one of the—from a man you don't know. I sent your mother and Mary and Eph to the crevice,

The father heard him through, and then said, quietly, "Why should we do anything? Wasn't you wishing only yesterday that vengeance would overtake him? Maybe it is true that the Byers gang raided him night before last, but from what you heard down yonder in the cedars it's pretty plain that he had forgiven them far enough to join in with them against us. Wasn't he on the way to bring Seth Byers when he was arrested?"

"Oh, yes; I know. But it doesn't make any difference, father. If you could have seen that poor, crippled old man when he came out of the Colonel's tent! They'd just been telling him they were going to hang him! I know it! And it just broke my heart! I couldn't remember any of the mean things he'd done—only the good ones; and—and—"

Alan was crying now, and taking no shame, therefore. Stephen Joyce rose as if the effort were painful, and put his hands on the boy's shoulders just as Eleanor had. "Then you can find it in your heart to forgive him, Alan, son? In spite of everything?"

Alan got a brief glimpse from that mountain-top which lies just beyond the valley of humiliation: a view-point from which duty takes its true shape of privilege.

"You needn't say that. It's just because of everything. We've—that is, I've been just as bitter as he has."

"That's enough, son; I was only trying you. You are your grandfather's boy, like him in so many ways, and I've been sore-hearted many a time for fear you'd be like him in that, too—hard and unforgiving. Let us go and see if your mother and Mary are safe; then we'll do what can be done for Jasper Garth."

They went together to the crevice cave, reaching it without adventure. It was—still is—only a shallow, water-worn chamber in the sandstone cliff, and the flare of a match easily lighted its farther recesses. It was empty!

Thereupon ensued a hurried council of war, in which it was decided that Alan should scour the neighborhood in search of the missing ones, while his father went straightway to the rescue of the family enemy. There was no apparent reason why Uncle Ephraim had not followed his instructions, but the tumultuous state of the country would account for almost anything.

They went back by way of the farm-house, on the chance of finding the others returned, and their outseting was from thence. Alan explained the location of the camp on the knoll as well as he could, and when his father still seemed in doubt as to its precise situation made a rough sketch of the Federal position, with the various picket-lines.

"You can't miss it if you go straight south from the cedar grove just beyond the Garth place," he said; and so they parted.

It was another bright moonlight night, and Alan kept the crest road to the house of the nearest neighbor to the eastward. Here he found confusion worse confounded. The guerrillas had retreated that way, looting as they went; and the members of the distracted household knew nothing but their own misfortune.

Luckily, as Alan thought, a passing refugee had been less unobservant. He had seen a woman and a little girl and a negro far down a cross-road leading to the Gordon Mines. Accordingly Alan struck out across the fields, and after a weary circuit of at least a dozen miles reached the house of the Gordon superintendent. Here he learned that the straggler's report was incorrect. There had been no refugees from the "brow" neighborhood, and the superintendent thought it very unlikely that Mrs. Joyce would have tried to come so far.

Alan would have promptly started back by the circuitous route he had come, but his father's friend dissuaded him. By waiting till daylight he could probably obtain permission to pass through the Federal lines, and so would reach the home neighborhood sooner than by tramping all night on the roundabout road.

There was no gainsaying the wisdom of this advice, and anxious as he was Alan made the best of it and went to bed, to dream that his mother and sister had gone over to the enemy, and that his father had somehow changed places with Jasper Garth.

These dreams, which had abundant accounts-for in the exciting events of the day, kept better step with the realities than most dreams do. In a certain sense Mrs. Joyce and Mary had gone over to the enemy; and if Stephen Joyce had not changed places with the condemned man, he was in a fair way to share his fate.

For this lamentable state of affairs the guerrilla's shot at short range was primarily responsible. When the old loyalist set out on his errand of mercy he was still suffering acutely from the effects of the powder-burn, and could scarcely see to find his way in the moonlit road. As brave men do, he made light of his own disability, and yet the loss of sight, which led him to pass Uncle Ephraim unrecognized a few yards from his own gate, became chiefly accountable for all the disasters which followed.

In the cedars beyond the Garth place he lighted a match, to get his bearings from Alan's map. The effort made him realize how badly his eyes were injured, and he was thankful that he knew the mountain well enough to traverse it blindfolded.

That was the reassuring thought; but one never knows how much the eyes help even on the darkest night and in the most familiar paths. Joyce set out on what he conceived to be a straight line for the point marked "camp" on Alau's map, and if he could have kept the course he would have been challenged by a Federal picket in the first hundred yards.

But he did not keep the course. On the contrary, the shorter "left-leg-step," which accounts for the aimless circlings of one lost in a wood, presently began to draw him more and more to the left, and thus he passed along the entire front of the division unchallenged.

After stumbling on until he was far beyond the guard-line of the brigade he was seeking he knew he must be lost; and thereupon a new fear beset him. If he had veered away from the Federal picket-line he must be approaching that of the Confederates. And capture by the latter threatened many things—the failure of his mission and Jasper Garth's death at the head of the list.

That fear was grappling with him when he heard the summons for which he had been listening—the sharp "Halt! Who goes there?" of a sentinel. But for the fear he would have stood still and stated his business, and all would have been well. As it was, he made sure that Jasper Garth's life was hanging in the balance and started to run.

Fortunately there were two of the pickets, and they were merciful enough not to fire at the stumbling intruder. Instead, they flung themselves upon him; and Joyce, thinking only of Jasper Garth and the awful probability, fought as only a strong man half blinded and desperate can fight.

But they were two to one, and it was soon over. One of them sat upon the captive, and the other passed the whispered word for the corporal of the guard. As soon as the squad came his captor let him get up, and he asked what was to be done with him.

"You'll find out when you've told the General how you got through the lines and what you're doing here," said the Corporal. And then to his men, "Tie his hands and take him to headquarters."

Joyce submitted quietly, and it was not until they had marched him within the circle of camp-fires that he began to suspect that he had fallen into the hands of those whom he was seeking.

"Who is your general?" he asked of one of the guards.

The man, named the Federal-division commander in a single curt word; and a few minutes later Stephen Joyce stood in the presence of the General.

At first he thought it would be a simple matter to clear not only himself, but Jasper Garth. But to his consternation he found himself put immediately upon trial for his life. The facts were all against him. He had been found skulking within the lines, had resisted arrest, and his explanation that he had come to plead for the life of a neighbor, whom he admitted was a rebel and his own personal enemy, was set down as a rather clumsy expedient devised on the spur of the moment.

The army was in the enemy's country, and the severest vigilance was the price of safety. The prisoner was searched, and when Alan's map was found upon him his fate was sealed.

"You must know the laws of war," said the General, who was at once judge, jury and prosecuting attorney. "You took your life in your hand when you came here to-night and made that map—and you have forfeited it. Have you anything more to say for yourself?"

The old man drew himself up proudly. "Nothing, General, except that I looked for a different welcome at the hands of those who are fighting for the cause in which I have lost nearly every friend I ever had. When will your sentence be carried out?"

"To-morrow morning."

"So soon?" The brave old partizan's eyes were quite sightless now, but it was for those whom he would leave behind. When they were taking him away he begged for another word.

"It's not for myself," he explained. "I have a son in your service, and I'd like to see him if I may." And then, in answer to a curt question, he gave Captain Robert's name and regiment.

It was a day of disasters. He did not know that Robert had been twice transferred since the date of that last letter, written on the field of Perryville. Hence, he was cruelly hurt when the General glanced over a paper handed him by the Adjutant, and said, coldly, "Falsehoods will not save you. There is no such name as Robert Joyce in the roster of that regiment."

It was the last hope, and the brave old man let it go with a little sigh for the widow and the fatherless.

And that was how it came about that old Ue' Ephraim, whom fear had kept from recognizing the stumbling figure in the moonlit road, waited long and in vain at the deserted farm-house for the return of the master; and how he took the road again a little after midnight, shaking his white head and wiping his eyes.

"Po' mistis! An' oh, dem po' chillen! To tink dem miselike gorriller-men done gone kilt Marse Joyce!"

[TO BE CONTINUED]

THE QUEEN OF THE YEAR

When suns are low and nights are long,
And winds bring wild alarms,
Through the darkness comes the Queen of the Year
In all her peerless charms—
December, fair and holly-crowned,
With the Christ-child in her arms.

The maiden months are a stately train,
Veiled in the spotless snow,
Or decked with the bloom of Paradise
What time the roses blow,
Or wreathed with the vine and the yellow wheat
When the moons of harvest glow.

But oh, the joy of the rolling year,
The queen with peerless charms,
Is she who comes through the waning light
To keep the world from harms—
December, fair and holly-crowned,
With the Christ-child in her arms.

—Edua Dean Proctor, in The School Journal.

GRANDMA DORKINS' CHRISTMAS

By Mary M. Willard



As Tom comin' home this Chris'mas, Mis' Dorkins?" Homer Fox asked, as he delivered the pint of milk he brought daily to the little house at the upper end of Scarborough.

Old Mrs. Dorkins wiped her wet, soapy hands on her checked gingham apron, and got the blue pitcher from the shelf upon which it was setting.

"He ain't quite sure," she answered; "he wants to come, he says, but seems like something always happens at the very last minute to keep him."

"I see you're fixin' for him, anyhow. What's them—mince pies?"

"Oh, yes, I fix for him every year. I wouldn't like him to come an' not find everything ready. I don't give him up till I have to. Them's mince pies, an' these are dried-apple pies. Come here." She opened the pantry door and beckoned him in. "I don't s'pose you know what these are," she said, with a smile half deprecating, half sad, lifting a cloth from the bread-board.

He peeped over her shoulder. "Gee whuts!" he cried, explosively. "You don't mean to say— I've got to have one o' them, Gran'ma Dorkins, sure's my name's Homer Fox! Horse ginger-cakes, by cracky! The very kind you used to make when me an' Tom an' Susy went to school to Aunt Liddy Jackson!"

Grandma Dorkins laughed, and wrapped him up three of the big brown cakes cut into some semblance of a horse with her pie-knife. "There's one for you, one for Susy, an' one for lil' Jeff. Tell Susy I sent 'em to remind her of old times. You an' she were sweethearts even when you used to scuffle with Tom for a piece of his ginger-cake."

"Tom's doin' middlin' well, ain't he, Gran'ma?" Homer asked, making a start to go, but holding onto the back door as he waited for her reply.

"Tom's doin' splendid," the old woman said, proudly. "He's way up in the railroad business now."

"It's near on ten years since he was home, ain't it?"

"Nine years this Christmas," she corrected him. "He's been intendin' to come for so long; but he's awfully busy. Tom is. With so much responsibility he can't hardly ever leave."

"Took his wife to Europe last year, didn't he?"

"Yes. They was gone three months. He wrote to me after they got back, an' said he thought for sure he was goin' to get up that year, but now he couldn't. I was real disappointed, for I'd been most certain I'd have him here last Christmas."

"It's likely he'll come this season," Homer remarked, by way of comfort.

"Don't you know, I'm sort o' positive he will," Grandma said, brightening. "I've been disappointed often enough before, but this time it's different—him not bein' home for so long—an' I wrote him I hadn't been well lately. My rheumatiz bothers me dreadful this winter. Puttin' it altogether, Homer, I'm bound Tom's comin' this time."

Homer hitched at his faded overalls, shut the door and then opened it a crack. He couldn't find a word to say.

Old Mrs. Dorkins laughed softly as she wiped off the kitchen table. "Don't you ever tell Homer; but I've baked horse ginger-cakes every year for Tom's home-comin', an' then had to send 'em to the Orphan Asylum over at Wallingford. Now, this year I calculate Tom's goin' to eat 'em himself."

"It's only two days till Chris'mas," Homer said, slowly. "You ought to be hearin' from him whether he's comin'. I'm goin' to the post-office. I'll see if there's a letter for you."

"No, Homer, don't," Grandma said, hastily. "I'd rather not have it till the last thing. You know, if he shouldn't be comin' I won't have anything to look for'ard to, an' if he is, my cakes an' pies are all baked. All I've got to do now is to shine the andirons over in the settin'-room, an' put up some greens to make it seem Christmassy. I wouldn't have the heart to finish, Homer, if I knew he wasn't comin'." She was still smiling, but tremulously.

"All right, Gran'ma," he said, with a great effect of cheerfulness in his voice; "but I'm like you, I'm positive Tom's comin'."

"Yes, I'm most sure we'll see him this time; but if there's a letter, Homer, don't bring it. Peter Crump always brings it up to me as he goes home on Christmas eve."

Homer climbed into his clattering old spring-wagon, and with the blues flapping loosely on the gray mare's hack he let her take her own gait down the long street.

Arriving at the post-office, he exchanged greetings with the few loungers gathered around the stove, sat down on a cracker-box, chewed a broom-straw, and gazed abstractedly at the dirty floor.

"Want your mail, Homer?" the postmaster inquired, when there came a lull in his duties.

Homer got up from the cracker-box to receive his copy of the Scarborough "Weekly Argus." He held it first in one hand, then in the other, hesitating. The last loungeer shuffled away from the fire and out the door. Homer roused to instant life.

"Say! Got any letters for Gran'ma Dorkins?" he demanded.

"One from Tom. Guess he ain't comin' this year, same as ever."

"Gee whuts!" Homer exclaimed—it was his nearest approach to swearing—"If Tom Dorkins don't come home this Chris'mas 'twon't be because Homer Fox ain't goin' to do his best to fetch him!"

"Tom's got to be a reg'lar high-flyer," observed the postmaster. "Has his private car an' all that sort o' thing!"

"To see that poor ol' soul havin' faith in his comin' year in an' year out, an' never showin' hair nor hide o' himself!" Homer broke in, excitedly. "It's more'n flesh an' blood can stand. Gimme a pasteboard box, Peter Crump, one big enough to hold these." He unwrapped the cakes Grandma Dorkins had given him and laid them on the counter. "There! If Tom Dorkins has got a piece of a heart hid away anywhere them cakes'll make him own to it."

"He writes to her sometimes an' sends her money," Peter Crump said, as he brought an assortment of boxes.

"Huh! What's money to her when she wants him!" Homer said, with scorn, selecting a box and trying the cakes, to see if they would fit. "Lemme have pen an' ink an' a sheet o' paper."

He wasn't much of a scribe, and he sucked the top of the pen frequently as he wrestled with his problem. Finally it was done, and he held it off at arm's length, surveying it with pride. This is what he had written:

"Tom Dorkins, for nine years your mother has baked these cakes for your Christmas home-coming, because you liked them when you was a boy. Has she got to send them to the Wallingford Orphan Asylum this year, same as always, on account of your not thinkin' enough of her to come?"

"HOMER FOX."

"If that don't bring Tom Dorkins, nothing will," he said, conviction in his voice.

His epistle was spread over the cakes, the lid tied on securely, stamped and addressed, while Peter Crump winked at so flagrant a violation of postal laws under his very nose.

On the morning of the day before Christmas, as the general manager of the Pocumoke and Westhaven railroad was leaving his private office, his eye was caught by a small package lying unopened upon his desk.

"Nearly forgot that thing again," he said. "It came last night, and I went home without it. Here, Phil," he called to his secretary, "open this package, and if it requires an answer fix up the polite thing."

When he returned some hours later the package was still on his desk, apparently unopened.

"I thought I told you to open this and see if it needed an answer!" he said, sharply.

"I did open it, Mr. Dorkins, but you are the proper person to answer it," the stenographer replied, in a curious tone.

Mr. Dorkins cut the string around the pasteboard box, a tinge of impatience in his manner. Lifting the lid, Homer's painstaking scrawl was exposed to view. He read it, a frown gathering on his brow. Over at his desk by the window the stenographer rustled his papers noisily, not daring to steal a look at his employer.

The general manager tossed the note aside with a muttered imprecation and took up one of the big cakes. It more than covered the palm of his hand, and there was borne to his nostrils a spicy smell that brought with it memories of his youth. Little things he had not thought of in years suddenly crowded upon him. His life had been such a busy one, such a shoulder-to-shoulder, neck-and-neck race for place and power, he had had no time for anything else.

He sat very still, holding the big cake on his outstretched palm, and all the struggle and care and turmoil, all the pleasure of success and a knowledge of power fell away from him. Again he heard the hickory logs crackling on the hearth, the brass andirons gleaming like gold in the firelight. It was Christmas eve, and his stocking hung on a nail by the high, black mantel. He was a great boy of ten, large and strong for his age. "Mother's man," she called him. She—his mother—sat in the circle of light from the cheerful fire stringing raisins and pop-corn

on long threads to trim his baby sister's Christmas tree.

He knew what he would find in that stocking in the morning. A red-cheeked apple in the toe, and a paper of fat walnut-meats and one of pop-corn made into taffy by some process known only to his mother. There would be half a dozen sticks of pink-and-white striped mint-candy, a ball of yarn covered with good stout sheepskin by his mother's own hands, and at the top of all such a brown, spicy-smelling, quicer-looking horse ginger-cake as he gazed down on now.

The noises from the street, the rattle and roar of traffic below them, were the only sounds heard in the general manager's private office. The stenographer had ceased to rustle his papers; instead, he almost held his breath for fear of disturbing the man sitting there so quietly.

Presently Tom Dorkins stirred. "Phil," he said, in such a gentle voice that the young man started. It was so different from the curt, brisk tones to which he was accustomed. "Is your mother living?"

"Yes, Mr. Dorkins."

"Are you going to spend Christmas with her?"

"Yes, sir," he answered, slowly. He did not quite understand the drift of his chief's questioning.

"That's right," said Mr. Dorkins, heartily. "And I'm going to spend Christmas with mine, too; a thing I haven't done for nine years, hoy. But I'll make it up to her to-morrow. Nine years to make up! Do you think I can do it?" He glanced hurriedly at his watch. "I can barely make connections if I'm to get there to-night. I won't have time to go home, Phil; you must stop at the house for me. Tell my wife not to be anxious; I've gone to my mother. She's old, and she's sent for me. I'll be back Monday."

Phil helped him on with his overcoat, and brushed a bit of imaginary dust from his hat before handing it to him.

"I wish I had time to get something to take her," Tom Dorkins said, as he pushed the box of cakes into his desk and locked it. "I've always sent her a present."

"You're all she wants, Mr. Dorkins," Phil ventured to say. He was hardly more than a boy, and he had a deal of swallowing to do to rid himself of the lump in his throat.

Some spits of snow were falling as Christmas eve drew to a close, and the wind sighed dismally around the corners of the house.

Grandma Dorkins piled an extra log on the brass andirons, and the ruddy glow lit up the room with a festive air.

"I wish the wind didn't howl so about the place," she said, restlessly. "It seems that mournful, exactly as if it knew I'd been hopin' against hope, an' Tom wasn't comin' this year, either."

She smoothed her black silk apron with nervous, trembling fingers as the up-train's whistle sounded.

"I'll soon know now," she whispered, feeling suddenly weak and old. If Tom shouldn't come! "I don't believe I'd ever get over it. That's what's been keepin' me up all through the fall, an' to be disappointed again—" She sat with wide, eager eyes on the door. "He'll come right in, for he knows I'm expectin' him."

Yes, he knew she was expecting him. As he came up the board walk he could see the firelight flickering on the wall, the wreath of Christmas green hanging against the window. His hand fumbled at the latch a minute, then he opened the door gently and went in.

"Tom got home last night, after all!" old Mrs. Dorkins cried, delightedly, as she reached Homer Fox the blue milk-pitcher from the kitchen window on Christmas morning.

"Gee whuts! You don't say!" Homer exclaimed, stamping the snow from his rawhide boots. "I guess you're happy as birds in the springtime, Gran'ma Dorkins!"

Tom, hearing voices, came out from the sitting-room, and finding Homer, went half way in the snow to meet him.

"Prosperity ain't puffed Tom up a bit," his mother thought, foudly. "He acted real glad to see Homer. What a long hand-shake he give him."

COCOANUTS IN CUBA

Next to bananas the most important product of eastern Cuba is cocoanuts. The trees grow rapidly without cultivation. The cocoanuts, especially the big ones, grow in bunches, five or six on a stem, away up near the top of the trees, just under the crown of plume-like leaves. Fruiters buy the nuts at the rate of eight dollars a thousand, and they are hulled on the island, ground in primitive mills and pressed for oil. Or, correctly speaking, we should put it in the past tense and say this was done before every industry was paralyzed by the Spanish soldiers.

The Cuban process of extracting oil from the cocoanut resembles that by which Texans make oil from cotton-seed. The cake of solid residue is fed to the pigs, about the only live stock ever successfully raised in eastern Cuba—and the shells are used for fuel in the sugar-factories. So far the oil has been locally employed only as a lubricator for sugar-making machinery—a wicked waste of

valuable material it seems to those familiar with the splendid possibilities of the product.

Here is an unequalled opening for the manufacturer of palm-oil soap, cocoanut-fiber mats, hats, etc., to say nothing of the hundred other uses to which parts of the tree, its fruits and fibers may be put. The saying goes that a cocoa-tree bears a nut for every day in the year. In time of peace one might buy a dozen nuts for twenty cents anywhere in the rural districts of Cuba, and he who has never tasted the milk from one freshly gathered can have no idea what is meant by "a draught fit for the gods." In their proper state, however, the nuts are not brown and hard, as you see them in Northern markets; they look like enormous pale-green apples, slightly elongated, for each still wears its Robin Hood jacket, which is removed before shipment. Being still "alive," as they say on the island, its shell is soft and easily cut with the machete, or long-bladed knife, which every countryman carries, or your own pocket-knife may answer the purpose. Make a hole in one end of the nut about the size of a half-dollar, and out gushes the milk like a living spring, white as chalk and thick as buttermilk, not, by any means, such sour stuff as you have seen come out of coconuts at home. Give one of those imported things to a monkey pining in captivity for its native food and he will refuse it with scorn and indignation.

The trouble is that the coconuts of commerce are gathered before they are ripe and entirely spoiled in transit. The fluid shut up within it should have no suggestion of milk, but be colorless as water, with a slight sparkle like that from some clear mountain spring, except for a slightly sweet and most delicious flavor; and if freshly picked in the early morning, after the nut has been swinging all night in the cool breezes, the liquid is almost ice cold. Where coconuts grow you never see inside of their shell that hard, white layer which Northerners grate and desecrate (one might as well say desecrate), for in its estate the nut has no such substance, only a creamy white film inside of it hardly thicker than your thumb-nail, which is scraped off with a spoon when eaten. Before drinking the juice the tenderfoot generally pours it out into another vessel than that which nature intended; but the sophisticated epicure tilts the coconut at just the right angle to let the milk trickle gently down his throat; and, like the old toper we have heard of, he wishes his throat were a mile long.

There is nothing in the wide world more nourishing or fattening, more health-restoring and youth-preserving. Emaciated invalids are recommended to begin on the juice of half a dozen nuts a day, the dose to be increased according to the patient's inclination. And the invalid is yet to be discovered who does not develop a taste for it so rapidly that in a week's time half a dozen nuts at a single sitting will hardly satisfy him. Each full-grown nut contains nearly a pint of this true "fountain of youth"—the same, perhaps, which old Conquistadores sought vainly far and wide, expecting to find it gushing out of the earth in some sequestered spot, instead of hanging, green and beautiful, everywhere overhead.—New York Sun.

THE DATE OF CHRISTMAS

For several hundred years there was much contention in learned and religious bodies as to the actual date of Christ's birth, and thus the proper date in the year to celebrate it by the followers of his doctrines. There are no definite allusions in the writings of any of his disciples on this point, nor has there ever been produced veritable proof of any character as to the exact period in the year when Christ was born. There are, very true, occasional references to the event in the Scriptures indicating that the nativity occurred in the winter season; but all investigation has failed to solve the question beyond controversy.

The institution of the anniversary dates back to the second century of Christendom, and it has been since uniformly celebrated by nearly all branches of the Christian church with appropriate rejoicings and ceremonies. The frequent, and sometimes heated, controversies, however, relative to the date of Christ's birth early in the fourth century led Pope Julius I. to order a thorough investigation of the subject by the learned theologians and historians of that period, which resulted in an agreement upon the twenty-fifth of December, and that decision seems to have so settled all disputes that that date was universally accepted except by the Greek church.

While this date has never been changed, the reckoning of it is made according to the Gregorian calendar, which was adopted in the latter part of the sixteenth century, and upon which computations of time in nearly all civilized nations have since rested.

Christmas is a favorite season for not only rejoicing, but also alms-giving, and it is peculiarly fitting and appropriate as a feature of the festivities that they who are blessed with plenty should take from the superabundance of their store, and by contributing to the scanty means of those less favored by fortune, enable them to celebrate the day in a happy and becoming manner.—Sunday-School Times.

HOW FLIES WALK CEILINGS

It is a curious fact how our understanding of many common and apparently simple things is modified by further investigation. The explanation of how flies walk on the ceiling, as given in some of our old readers, was that each little fly-foot is a miniature air-pump, a theory that is now proved to be fallacious. It was supposed that the bottom of the foot adhered to the glass by suction, all air beneath it being pressed out, so that it was held in place by the pressure of the air without. But flies have been known to walk on the inner side of a glass receiver after all, the air had been exhausted, which shows that they do not need the pressure of the air to uphold them. A microscopic examination of a fly's foot clearly disproves the "sucker" theory, for the foot cushion is covered with hairs, which prevent a close contact of the foot with the glass.

A later theory, propounded by Hooke, was that flies stick to the glass by means of a viscoous fluid substance which exudes from the hairs of their feet. This theory was thoroughly investigated twelve years or so ago by Dr. Rombout, who demonstrated that it was only partly sound, for though these hairs do certainly exude an oily fluid, the fluid is not sticky and does not harden when dried.

It is to Dr. Rombout's experiments that science owes what is now regarded as the true theory of the walking of flies on smooth substances—that they hang on by the help of capillary adhesion—the molecular attraction between solid and liquid bodies. By a series of nice calculations, such as weighing hairs and measuring their diameters, and immersing the end of a hair in oil or water, to make it adhere when touched to glass, Dr. Rombout proved that capillary attraction would uphold a fly were it four ninths as heavy again as it is at present. It is true that the foot hairs are very minute, but as each fly is said to be furnished with about one hundred and twenty thousand of them we need not be surprised at what they can do.

Reasoning from this theory we might conclude that flies find it difficult to mount a glass slightly dampened, because of the repulsion between the watery surface and the oily liquid exuding from the feet; and we might likewise expect them to be impeded by a slight coating of dust, because the spaces between the hairs would be filled with dust. Careful observation seems to confirm these inferences. When we see a fly making his toilet, he is not, as we might suppose, cleaning his body, but his feet, so that they may the more readily adhere. Every one has noticed how quickly a fly takes flight, even when he has been dozing half an hour in the same position. This new theory makes it easier to understand how he can so readily detach himself, for the air-pressure and "gum" theories both implied more or less effort in releasing his feet.—Our Animal Friends.

A PUEBLO LEGEND

Through all the grotesque darkness of pueblo superstition runs a bright thread of poetic legend; and one legend, since it is woven around the ruined estufa in the ruined pueblo of Pecos, has a right to be told here.

Pecos was founded by the man-god, the great Montezuma himself, and he therefore probably felt a protective interest in it; at any rate, when the aspiring Spaniards lay upon the conquered pueblos a cursed rule of restraint and wrong Montezuma invoked against them the aid of his brother gods in heaven. These told him to plant a tree upside down beside the chief estufa of Pecos, and to light a holy fire upon the altar; and if the fire were kept burning until the tree fell, then would there come to the rescue of the oppressed a great pale-face nation, and deliver them from the Spanish thralldom.

So the fire was lit, and a sentinel was posted to guard its sacred flame, and the tree planted—under the circumstances the planter would be excusable in planting the tree as insecurely as possible. But year after year passed and the tree remained standing. Sentinel succeeded sentinel, and the flame lived on. Generations withered away, yet deliverance seemed no nearer. One day there came a rumor from old Santa Fe that the city had surrendered to a white-faced people. Was this the band of deliverers? That day at noon the sacred tree toppled and fell. Spanish rule was no more. The prophecy had been fulfilled.

If there is an unbeliever of this legend, let him go to the ruins of Pecos and see for himself that whereas the city was built upon a mesa so barren that no trees are there, yet across the crumbling estufa lies the fallen body of a pine of mighty growth. The like of it is not for many miles around. Whence did it come?—Frank Leslie's Popular Monthly.

BISMARCK'S FAMILY NAME

Few people know how Prince Bismarck's ancestors acquired their name. Bismarck is the name of one of those ancient castles, a short distance from Stendal, on the road from Cologne to Berlin, in the center of the old Marquisate of Brandenburg. The castle had this name because it defended the "Marca," or the line where the river Biese formed a boundary, or mark of defense. Hence the name of Bismarck.—Chicago Tribune.

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PEACE AND GOOD-WILL

At the break of Christmas day,
Through the frosty starlight ringing,
Faint and sweet and far away,
Comes the sound of children singing,
Chanting, singing,
"Cease to mourn,
For Christ is born,
Peace and joy to all men bringing!"

Careless that the chill winds blow,
Growing stronger, sweeter, clearer,
Noiseless footfalls in the snow
Bring the happy voices nearer;
Hear them singing,
"Winter's dream:
But Christ is here,
Mirth and gladness with him bringing!"

"Merry Christmas!" hear them say,
As the East is growing lighter;
"May the joy of Christmas day
Make your whole year gladder, brighter!"
Join their singing,
"To each home
Our Christ has come,
All love's treasures with him bringing!"
—Current Literature.

THE HOMELESS SINGER

ON A cold, dark night, when the wind was blowing hard, Conrad, a worthy citizen of a little town in Germany, sat playing his flute, while Ursula, his wife, was preparing supper. They heard a sweet voice singing outside:

"Foxes to their holes have gone,
Every bird into his nest,
But I wander here alone,
And for me there is no rest."

Tears filled the good man's eyes as he said, "What a fine, sweet voice! What a pity it should be spoiled by being tried in such weather!"

"I think it the voice of a child. Let us open the door and see," said his wife, who had lost a little boy not long before, and whose heart was opened to take pity on the little wanderer.

Conrad opened the door and saw a ragged child, who said, "Charity, good sir, for Christ's sake!"

"Come in, my little one," said he; "you shall rest with me for the night."

The boy said "Thank God!" and entered. The heat of the room made him faint, but Ursula's kind care soon revived him. They gave him some supper, and then he told them that he was the son of a poor miner and wanted to be a priest. He wandered about, and sang, and lived on the money people gave him. His kind friends would not let him talk much, but sent him to bed. When he was asleep they looked in upon him, and were so pleased with his pleasant countenance that they determined to keep him if he was willing. In the morning they found that he was only too glad to remain.

They sent him to school, and afterward he entered a monastery. There he found the Bible, which he read and from which he learned the way of life. The sweet voice of the little singer learned to preach the good news, "Justified by faith, we have peace with God through our Lord Jesus Christ." Conrad and Ursula when they took that little street-singer into their house little thought that they were nourishing the great champion of the Reformation. The poor child was Martin Luther.—Sunday-School Advocate.

SPURGEON A FRIEND TO CHILDREN

In addition to Mr. Spurgeon's various other duties he had control of an "orphanage" which received fatherless children. He was on terms of friendly intimacy with them, and even the most friendless of the orphans felt that he could tell his troubles into the sympathetic ear of the great preacher. The following incident illustrates this statement:

"Sitting down upon one of the seats in the orphanage grounds, we were talking with one of our brother trustees, when a little fellow, we should think about eight years of age, left the other boys who were playing around

us, and came deliberately up to us. He opened fire upon us then, 'Please, Mr. Spurgeon, I want to come and sit down in that seat between you two gentlemen.'

"Come along, Bob, and tell us what you want."

"Please, Mr. Spurgeon, suppose there was a little boy who had no father, and lived in an orphanage with a lot of other little boys who had no father; and suppose these little boys had mothers and aunts who came once a month and brought them apples and oranges, and gave them pennies; and suppose this little boy had no mother and no aunt, and nobody ever came to bring him nice things, don't you think somebody ought to give him a penny? 'Cause, Mr. Spurgeon, that's me!"

"That was a touching appeal; somebody felt something wet in his eye, and Bob got a sixpence and went off in a great state of delight. He had seized the opportunity to pour out a bitterness which had rankled in his little heart and made him miserable when the monthly visiting-day came around, and, as he said, 'nobody ever brought him nice things.' This incident not only brought Bob a plentiful supply of pocket-money, but was the means of helping others like him who were both motherless and fatherless."

HIS FAITH

In a terrible storm a Lake Superior steamer was stranded upon a rocky reef. Shrieks of alarm and groans of despair were heard above the roar of wind and wave. One man was calm. Captain Moor moved among the frightened passengers, risking his life to prevent a panic, and to save those thrown by the combing billows.

While he stood looking to see that every one grasped the life-line a huge wave knocked down the cabin and washed the ruins over upon the captain, crushing him to the deck.

"I am lost!" he cried. "Good-by—hold onto the line!"

Another wave washed away the debris and released the captain, but his injuries chained him to the deck. All that day, while the storm raged and the waves washed over the steamer, the captain spoke cheering words to the despairing souls.

As darkness gathered over the tossing waters he said, "Friends, let us pray!"

He led them in prayer. Throughout that night of agony his voice was heard, putting heart into those near him and imploring help from God.

At daylight on the second morning relief came, and the survivors, after forty-eight hours of gazing into the face of death, were rescued.

They received one impression which stamped itself upon them even more deeply than the memory of their sufferings and fears. It was made by the grand courage and sublime faith of the captain.

"But for him," said a passenger, "we should all have lost hope, and in our despair died. We saw him prostrate on the deck, wounded and unable to rise, yet speaking words of good cheer, and praying God to save us. We blessed him, and kept up a good heart."

"ASHAMED TO TELL MOTHER"

Such was a boy's reply to his playmates who were trying to tempt him to do something wrong.

"But you needn't tell her; no one will know anything about it."

"I would know all about it myself, and I'd feel very mean if I couldn't tell mother."

"It's a pity you weren't a girl! The idea of a boy running and telling his mother every little thing!"

"You may laugh if you want to," said the noble boy, "but I've made up my mind never, so long as I live, to do anything I would be ashamed to tell my mother."

WORDS TO LIVE BY

After closing one of the great National Woman's Christian Temperance Union conventions the delegates went to visit Miss Willard's home in Evanston, Ill. Many of the women who had this privilege were deeply impressed with the mottoes on the walls of Miss Willard's study and sleeping-room.

In the den was this motto, which explains in some degree why Miss Willard accomplished so much work: "For who knows most, him loss of time most grieves."

In the sleeping-room, inscribed on a small white banner suspended from the head of the bed by a silken cord, was this:

"Sleep sweetly in this quiet room,
O thou, whoever thou art,
And let no mournful yesterdays
Disturb thy quiet heart.
Nor let to-morrow scare thy rest
With dreams of coming ill;
Thy Maker is thy changeless friend,
His love surrounds thee still.
Forget thyself and all the world;
Put out each glaring light;
The stars are watching overhead,
Sleep sweetly, then. Good-night."

On the wall in the same room was this quotation from Whittier. All who knew her will testify how well this woman stood the test.

Search thine own heart. What paineth thee
In others, in thyself may be.
All dust is frail; all flesh is weak,
Be thou the true (woman) thou dost seek.

SIN

Sin is the most expensive thing possible. It wastes money. It wears the body into decay. But, bad as these things are, there are even worse behind, for it blights the intellect and withers the moral nature of the man. It weakens the will; it blunts the conscience; it hardens the heart. It dries up all the finer feelings of the soul, so that ultimately all regard for truth and holiness and purity is gone. But worse yet. Sin is an enslaving thing. It becomes the master of the man who indulges in it and sets him to do the hardest drudgery. It hires him out, as it were, to feed swine, leaving him to feed along with them. That which was at first a joy becomes in the end a bondage. That which was at first a pleasant companion becomes at length a cruel task-master, who compels him to make bricks without straw and sometimes even without clay.—Dr. W. M. Taylor.

HOW LIES GROW

First somebody told it,
Then the room wouldn't hold it,
So the busy tongues rolled it
Till they got it outside;
Then the crowd came across it,
And never once lost it,
But tossed it and tossed it
Till it grew long and wide.

This lie brought forth others,
Dark sisters and brothers,
And fathers and mothers,
A terrible crew;
And headlong they hurried,
The people they flurried,
And troubled and worried,
As lies always do.

KIND WORDS

Kind words may prove pearls of the highest price; soften and turn away wrath; make friendship out of enmity, and build a monument of good that the storms of time cannot destroy. Cherish them, dear boys and girls, a kind heart full of love and sympathy, and loving words will spring to your lips to bless, to help and to comfort all around you. "That which the fountain sends forth returns again to the fountain."

Better to hope, though the clouds hang low,
And to keep the eyes still lifted,
For the still blue sky will still peep through
When the ominous clouds are rifted.
There was never a night without a day,
Or an evening without a morning;
And the darkest hour, as the proverb goes,
"Is the hour before the dawning."

A life of real virtue, of nobleness, of true greatness, is not an accident. It comes, if it comes at all, from lofty aspirations, from incorruptible motives, long cherished and held sacred as life.

THE CAUSE OF MANY SUDDEN DEATHS

There is a disease prevailing in this country most dangerous because so deceptive. Many sudden deaths are caused by it—heart disease, pneumonia, heart failure or apoplexy are often the result of kidney disease. If kidney trouble is allowed to advance the kidney-poisoned blood will attack the vital organs, or the kidneys themselves break down and waste away cell by cell.

Bladder troubles most always result from a derangement of the kidneys, and a cure is obtained quickest by a proper treatment of the kidneys. If you are feeling badly you can make no mistake by taking Dr. Kilmer's Swamp-Root, the great kidney, liver and bladder remedy.

It corrects inability to hold urine and scalding pain in passing it, and overcomes that unpleasant necessity of being compelled to go often during the day and to get up many times during the night. The mild and the extraordinary effect of Swamp-Root is soon realized. It stands the highest for its wonderful cures of the most distressing cases.

Swamp-Root is pleasant to take, and sold by all druggists in fifty-cent and one-dollar sized bottles. You may have a sample bottle of this wonderful new discovery and a book that tells all about it, both sent free by mail. Address DR. KILMER & CO., Binghamton, N. Y. When writing mention reading this generous offer in the FARM AND FIRESIDE.

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SMILES



MY FAT FRIEND'S SMILE

My fat friend's smile—it's a homely phrase,
But it takes me back to the other days;
To the other days when the heart was young
And its saddest songs were yet unsung.

My fat friend's smile—I can see it yet,
With its twinkling mirth that I can't forget,
And the wrinkles and dimples that made for me
A map of the land of jollity.

You knew when you saw it ripple and start
From his laughing eyes that it came from
his heart;
'Twas the smile of a friend who was true
to me—
The sort of a smile that is good to see.

My fat friend's smile—well, it's good to know
That you had such a friend in the long ago;
And it brightens many a weary while—
This thought of my fat friend and his smile.

I expect, if the pearly gates ope to me,
My very first inquiry there will be,
'Have you seen an angel who's built on the
style
Of my fat friend with the merry smile?'
—Baltimore American.

A SMALL BROTHER'S REVENGE

READ on the small boy and he will
turn, as the elder sister discovered
who made merriment for the guests
by describing at the dinner-table
the ludicrous assortment of things
she had found in her little brother's pocket.
As "Harper's Bazar" relates, he retaliated by
sending each guest the following document:

"SOPHIE BELL'S TOP BUREAU DRAWER,"

A SEQUEL TO

"THE CONTENTS OF A BOY'S POCKET."

Pull easy: a box-lid pokes up in the back
and keeps it from opening. But once opened,
a lot of things pop up, like jacks-in-a-box,
like as if they had springs in them, and had
only stayed down because they were pressed
to it. Some things fall out on the floor, but
there's plenty left. Here they are—ribbons,
mostly green. Pull the end of one and this
is what comes with it: A shoe-horn, a pocket-
book, a piece of a United States flag, a shoe-
string, a bracelet, a package of chewing-gum,
one of my neckties, two of papa's, a lace
scarf, an old collar, a pair of white gloves,
a huckle, a belt, and a letter without an
envelop, which says:

"DEAR SOPHIE:—Paul and I are going to
Washington on Saturday. Father doesn't
know. Don't tell a soul. Destroy this.
Yours,
JULIA."

A huddle of letters tied with blue ribbon, a
horse-radish bottle with a pickle in it, two
postal-cards, more handkerchiefs, a bundle
of sweet powder, a box of college-pins, a piece
of rope, a small diary, a card-case, a feather
boa, a half-filled box of Huyler's, a bicycle
tool-bag, a bunch of samples, a dried rose, a
picture of the man she likes least of all,
some visiting-cards, an old coin, a lump of
sugar, two spoons of cotton, a receipt for
home-made caramels, Jack's last letter, a
slipper-bag, a package of cigarettes (unopened,
with "He swore off June 25th" written across
it), a false mustache, more of papa's neck-
ties, another one of mine, a golf-ball, a meers-
chaum pipe, a package of hair-pins, one white
slipper, a book, two tinctures, something in
an envelop marked "From Thoreau's grave,"
a theater program, an umbrella-cover, a
watch chatelaine, a shirt-waist, some em-
broidery, more gloves, a monogram fan, a
pair of opera-glasses and a curling-iron.

This is a true story. If it doesn't beat the
other I'll go under.
DICK BELL.

VERY FORGETFUL

A certain elderly gentleman suffered much
from absent-mindedness, and was frequently
compelled to seek the assistance of his ser-
vant. "Thomas," he would constantly say,
"I have just been looking for something and
now I can't remember what it is;" where-
upon the obliging Thomas invariably made
suggestions, "Was it your purse, or specta-
cles, or check-book, sir?" and so on, till he
hit on the right object.

One night, after the old gentleman had re-
tired, the bell rang for Thomas, and on
reaching the bedroom he found his master
rambling restlessly about the room.

"Thomas, Thomas," he said, "I came up
here for something, and now I've forgotten
what!"

"Was it to go to bed, sir?" suggested his
faithful retainer.

"Ah! the very thing—the very thing! Thank
you, Thomas! Good-night!"—Detroit Tribune.

QUITE A TRICK

A government department official, who re-
cently returned from London, brings this
story with him:

A married couple was walking down one
of the main thoroughfares of a north coun-
try town, and the husband, noting the atten-
tion other women obtained from passers-by,
remarked to his better half:

"Folks niver look at thee. I wish I'd
married some one better looking."

The woman tartly replied:
"It's thy fault. Dusta think a man'll stare
at me when you're walking wi' me? Thee
step behind and thah'll see whether folks
don't look at me."

He hung back about a dozen yards, and for
the length of the street was surprised to see
every man his wife passed stare hard at her,
and turn round and look after her when she
had passed.

"Sal, lass!" he exclaimed, "I was wrang,
an' tak' it back. I'll niver say owt about
thy face again."

His wily spouse had accomplished the trick
by putting out her tongue at every man she
met.—Exchange.

SAME OLD STORY

They had just got married, and were start-
ing on their honeymoon. The bride had got
the man she loved, and she didn't care who
saw her put her head on his shoulder. The
bridegroom had got a farm with his wife
and if he wanted to squeeze her hand or feed
her with sweets, whose business was it? A
little old man sat opposite the couple, and
he looked at them so often that the young
husband finally explained:

"We've just got married."
"I knowed it all the time," chuckled the
other.

"And we can't help it, you know."
"No, you can't; I'll be blowed if you can."
"I presume it all seems very silly to an
old man like you?"

"Does it? Does it?" cackled the old fel-
low. "Well, I can tell you it does not, then.
I've been there three times over, and now I'm
on my way to marry a fourth. Silly? Why,
children, it's paradise boiled down!"—London
Answers.

HIS HONOR SATISFIED

"Vat ees eet, Jean?"
"Monsieur, ze doctaire comes to-day to vac-
cinate monsieur."

"Nevaire! I will die first! Eet ees de-
grading! Eet ees an insult!"

"But, monsieur, eet ces also ze law."

"Perfidious law! Ah, I have eet! I have
cet now! Beautiful! Listen! You will pre-
pare ze sword!"

"Ze sword, monsieur?"

"Prepare ze sword. Ou ze point of one
sword, monsieur, ze doctaire will ruh his vac-
cinate mattaire. See? Zen he will diffaire
from ue on 'ze Dr-r-yfus questione. I will
feel insulted. I will challenge ze doctaire.
He will accept, naming swords as ze weapons.
We will fight at once, and here ze doctaire
takes ze prepared sword. See? One, two,
three! Ze doctaire pricks me slightly in ze
arm! Ha, ha! Honor is satisfied! I am vac-
cinate!"—Buffalo Express.

THE DONKEY'S DONK

A wee little lady who lives in a suburb
saw and heard a donkey for the first time the
other day while out for a walk with her aunt.

She talked about it continually after get-
ting home. It was "such a boofu donkey,"
and "such a good donkey," and so on through
her small store of adjectives.

When her father came home at night he
heard the story over again, with a renewal
of the adjectives.

"And so you liked the donkey, darling, did
you?" he asked, taking the tiny lass on his
knee.

"Oh, yes, papa, I liked him. That is, I
liked him pretty well, but I didn't like to
hear him donk."

HIS BUSINESS

Judge Searens—"What is your trade?"

Prisoner (who was caught in a gambling-
house raid)—"I'm a locksmith."

Judge—"What were you doing in there when
the police entered?"

Prisoner—"I was making a bolt for the
door."—Detroit Tribune.

DIFFERENT OPINION

"I wonder will they miss me?" wrote the
poet in violet ink on gilt-edged paper. And
the editor, as he tossed the manuscript into
the yawning gulf at his side, murmured, "If
they do they never ought to be trusted with
a gun again."—Examiner.

Wonderful Results

A Trial Treatment of Dr. Whitehall's Rheu-
matism Cure Will Be Sent FREE
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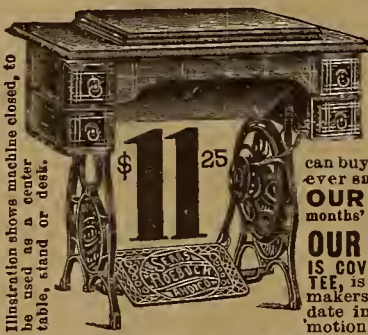


"Seeing is believing" is a true adage.
Its truth appeals to every one, and no less
true is Dr. Whitehall's theory of "curing
and proving." Dr. Whitehall has long
made it a practice to send to every rheu-
matic sufferer he hears of a trial treatment
of his rheumatism cure FREE of charge. He
has letters on file from hundreds of people
who say that the five days' trial treatment
sent them absolutely cured them of stub-
born cases of rheumatism that had defied
the best efforts of physicians. Others write
that the trial treatment was enough to prove
that the remedy "fit the case," and that
they were permanently cured by following
up with a few 50c. boxes of the remedy
bought at the drug-store.

S. A. Barnes, Avena, Kentucky, writes: "A few days ago I received a sample package you sent me at the request of Mr. Asbury, and I never had anything do me so much good in all my life. I have had muscular rheumatism, and I believe I am safe in saying that I have taken as much medicine as I could carry, and it never did me as much good as your little sample package. After using the sample I bought two boxes at the drug-store, and I now can safely say I am entirely rid of rheumatism for the first time in years."

The trial treatment was the God-send that brought this sufferer hope. The remedy "cured" and "proved" itself. Write to-day for a free trial treatment for yourself or your friend who suffers from Rheumatism, Gout or Neuralgia. A trial treatment will be sent you to any address absolutely free of charge. Remember you incur no obligation whatever in writing. A postal-card will do. Address

DR. WHITEHALL, SOUTH BEND, IND., U. S. A.



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HIGH GRADE DROP-HEAD CABINET NEW QUEEN SEWING MACHINE, by freight, C. O. D., subject to examination. You can examine it at your nearest freight depot, and if found perfectly satisfactory, exactly as represented, equal to the highest grade sewing machines advertised by other houses at \$20.00 to \$30.00, and as good a machine as you can buy from your dealer at home at \$30.00 to \$40.00, the greatest bargain you ever saw or heard of, pay your railroad agent and freight charges. OUR SPECIAL OFFER PRICE \$11.25 give the machine three months' trial in your own home and we will return your \$11.25 any day you are not satisfied.

OUR \$11.25 NEW QUEEN SEWING MACHINE IS COVERED BY A BINDING 20-YEAR GUARANTEE, is made by one of the best sewing machine makers in America, has every new and up-to-date improvement, high arm, positive four-motion feed, very light running, does any work that can be done on any sewing machine made. It comes in a beautiful solid antique oak, drop head cabinet, as illustrated. Oak cabinet is beautifully finished, highly polished, elaborately finished throughout.

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COMPLETE WITH ALL ACCESSORIES, including 1 quilter, 2 screwdrivers, 6 bobbins, 1 package of needles, 1 cloth guide and screw, 1 oil can filled with oil, and a complete instruction book, which makes everything so plain that even a child without previous experience can operate the machine at once. FOR 25 CENTS EXTRA, we furnish, in addition to the regular accessories mentioned, the following special attachments: 1 thread cutter, 1 braider, 1 hinder, 1 set of plain hemmers, different widths up to 1/2 inch of an inch.

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ceived through Dr. Peebles' treatment. She suffered

for years from falling of the womb. Francis Waverling, Seattle, Washington, suffered for twenty years with a severe case of Catarrh; completely cured through the psychic treatment. Geo. H. Weeks, 53 Minerva Street, Cleveland, Ohio, sends heartfelt thanks for restoration of health after suffering from nervous prostration and insomnia; says he now enjoys restfulness and sleeps sound every night. Mrs. Mary A. Clair, Lexington, Kentucky, after thirty years' continual suffering from epilepsy and trying to be cured by eminent physicians, writes: "Two months of your treatment has made earth almost a heaven to me." To all the sick Dr. Peebles makes this liberal offer: Don't send any money, simply your name and address, also leading symptoms, and through his psychical power he will diagnose your case; you will also receive, free of any cost whatever, special instruction and his wonderful book, which mean health and strength to you. Address Dr. J. M. Peebles & Co., Dept. U, Battle Creek, Michigan.

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FREE

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Diseases, Rheumatism, Etc.

Rev. A. C. Darling, minister of the gospel, under date of May 20th, writes from his home at North Constantia, Oswego County, New York:

I have been troubled with Kidney and kindred diseases for sixteen years, and tried all I could get without relief. Two and a half years ago I was taken with a severe attack of La Grippe, which turned to pneumonia. At that time my Liver, Kidneys, Heart and Urinary Organs all combined in what to me seemed their last attack. My confidence in man and medicine had gone. My hope had vanished, and all that was left me was a dreary life and certain death. At last I heard of Alkavis, and as a last resort I commenced taking it. At that time I was using the vessel as often as sixteen times in one night, without sleep or rest. In a short time, to my astonishment, I could sleep all night as soundly as a baby, which I had not done in sixteen years before. What I know it has done for me I firmly believe it will do for all who will give Alkavis a fair trial. I most gladly recommend Alkavis to all.

Sincerely yours,

(Rev.) A. C. DARLING.

The venerable Mr. Joseph W. Whitten, of Wolfboro, N. H., at eighty-five years of age, also testifies to the powers of Alkavis in curing severe Kidney and Bladder Disorders, Dropsy and Rheumatism. Hundreds of others give similar testimony. Many ladies also join in testifying to the wonderful curative powers of Alkavis in Kidney and allied diseases, and other troublesome afflictions peculiar to womanhood, which cannot with propriety be described here.

That you may judge of the value of this Great Discovery for yourself we will send you one Large Case by mail free, only asking that when cured yourself you will recommend it to others. It is a Sure Specific Cure and cannot fail. Address The Church Kidney Cure Company, No. 471 Fourth Avenue, New York City.

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RUPTURE CURED while you work. You pay \$4 when cured. No cure, no pay. ALEX. SPEIRS, Box 513, WESTBROOK, MAINE

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DEAFNESS CURED OR NO PAY. C. H. ROWAN, MILWAUKEE, WIS.

BED-WETTING CURED. Sample FREE.

HOUSEHOLD

[CONTINUED FROM PAGE 13]

AT CHRISTMAS-TIME

At Christmas-time the fields are white,
And hill and valley all bedight
With snowy splendor, while on high
The black crows sail athwart the sky,
Mourning for summer days gone by,
At Christmas-time.

At Christmas-time the air is chill,
And frozen lies the babbling rill;
While sobbingly the trees make moan
For leafy greenness once their own,
For blossoms dead and birdlings flown,
At Christmas-time.

At Christmas-time we deck the hall
With holly-branches brave and tall,
With sturdy pine and hemlock bright;
And in the Yule-log's dancing light
We'll tell old tales of field and fight,
At Christmas-time.

At Christmas-time we pile the board
With flesh and fruit and vintage stored,
And 'mid the laughter and the glow
We tread a measure soft and low,
And kiss beneath the mistletoe,
At Christmas-time.

O God, and father of us all,
List to thy lowliest creature's call;
Give of thy joy to high and low,
Comfort the sorrowing in their woe,
Make wars to cease and love to grow,
At Christmas-time.

Let not one heart be sad to-day,
May every child be glad and gay;
Bless thou thy children great and small,
In lowly hut or castle hall,
And may each soul keep festival,
At Christmas-time.

—Unidentified.

GO TO THE RUMMAGE SALE

How cleverly was the recent "rummage sale" that was held at the famous Crouse stables, in Syracuse, New York, for the benefit of the Visiting Nurse Association. It was well advertised by both the modern newspaper and the primitive but effective method—by the speech of people, or active "promoters."

As the name implies, the attics of all the friends of this worthy charity had been diligently searched, and the rummage, of whatever style, variety or condition, thus accumulated was gathered together almost "from the ends of the earth" for this grand sale.

At this "golden opportunity" the articles so generously donated consisted of women's, children's and men's clothing of every description, shoes, furniture, rugs, millinery, china—ranging from coarse kitchenware to the dear old familiar greens and blues of our grandmothers' days—toys and bric-a-brac.

Other attractions included a fancy store department, picture-frames, children's department, kitchen utensils, a one-cent, a five-cent and a ten-cent counter.

Wholesome canned fruit, jellies and pickles were presided over by thrifty housewives. One of the most modern up-to-date departments was devoted to the sale of delicious home-made confectionery. The graceful ferns and fragrant flowers proved a wise investment.

The book-stand, where books and magazines were sold at one cent and upward, resembled the familiar ones seen in the great railway-stations.

A very popular feature at this philanthropic enterprise was a daintily arrayed doll which the Hon. Chauncey M. Depew kindly named. For only ten cents one could have a guess at the name of the doll.

A substantial lunch was served each day of the sale from 12 M. to 2 P. M., and a musicale was held in the evening.

A good plan which is often successfully carried out when the beneficiary society is non-sectarian is to have each church in the village take charge of the entertainment for one evening. When this is not feasible the day-school children could surely give an interesting entertainment or arrange "A National Evening." Have patriotic addresses and national music, with tricolor decorations; serve ice-cream, loyally striped red and white, on festive blue china. Keep the enthusiasm at high tide and the prices low. ADRIE K. JOHNSON.

SAUCES

Properly made, white sauce—which forms the foundation of any number of savory sauces for fish, meat, fowls, eggs and vegetables—neither has a taste of raw flour nor needs straining, but no dish shows lack of skill or neglect of details quicker.

PLAIN WHITE SAUCE.—A generous tablespoonful of butter and a smaller one of flour should be allowed for every cupful of liquid; melt the butter, add flour, and stir smooth; add one fourth of a tablespoonful of salt, a dash of pepper and one cupful of white stock (at once, not by degrees), and stir constantly with the flat of a spoon until it boils smooth. Milk, cream or water can be substituted for the stock.

EGG SAUCE.—Make plain white sauce, substituting water for stock, and add one tablespoonful of finely minced parsley. When it has boiled two minutes remove from the fire and immediately stir in two teaspoonfuls of lemon-juice, the yolk of two hard-boiled eggs chopped fine, and the whites of some cut in rings.

BECHAMEL SAUCE.—Make white sauce, substituting one half cupful of cream for one half the white stock; when boiled remove from the fire and at once stir in the beaten yolk of one egg, and when evenly mixed add one tablespoonful of lemon-juice.

MUSHROOM SAUCE.—Make white sauce with white stock, and when it boils smooth add one cupful of mushrooms cut into small pieces; heat through and serve at once.

CELERY SAUCE.—Boil tender and press through a colander enough celery to make one half cupful of pulp; make white sauce with white stock, and when it boils add the celery-pulp and one tablespoonful of minced celery-tips. This is delicious with chicken.

ONION SAUCE.—Make white sauce with stock and cream, seasoning with salt, one half teaspoonful of sugar and a dash of cayenne. Boil one large onion and press through a colander, add to the boiling sauce, and serve at once.

HORSE-RADISH SAUCE.—Make white sauce with stock and cream, flavor with one half teaspoonful each of onion-juice and sugar, and when it boils add four tablespoonfuls of parsley, grated horse-radish and two tablespoonfuls of lemon-juice or vinegar. Especially good with beef.

CURRY SAUCE.—Make plain white sauce with stock, add one teaspoonful of onion-juice, and when it boils stir in one tablespoonful of curry-powder dissolved in a little water.

MUSTARD SAUCE.—To one cupful of white sauce made with stock add a dash of cayenne and three tablespoonfuls of made mustard. Serve with corned beef.

KATHERINE B. JOHNSON.

THIS AND THAT ABOUT FROSTING

Dark-red coloring for cakes and fruits can be made in the following manner: Take eight grains of cream of tartar finely powdered, and ten grains of cochineal; add to this a piece of alum the size of a small pea, and boil with four tablespoonfuls of soft water in a granite pan for fifteen minutes; then strain through cheese-cloth, put into a bottle, and keep tightly corked. If you wish to keep it any length of time put in a little alcohol.

PINK COLORING.—Strawberry or cranberry juice makes the best pink coloring. When you cannot get them, buy two cents' worth of cochineal, put it into one half teacupful of alcohol, let stand twenty minutes, strain through cheese-cloth, put into a bottle, and cork tightly.

CREAM FROSTING.—Take one half pint of sweet, thick cream whipped, sweetened and flavored with vanilla, and spread this between the cakes and on the top. This is delicious. A little pink coloring adds to the beauty.

FROSTING WITHOUT EGGS.—Mix thoroughly with cold water sufficient confectioner's sugar so that it will spread nicely, and flavor to taste. Spread on the cake while warm (not hot). Be sure to always use confectioner's sugar, as that is better than granulated or pulverized. No eggs are necessary. You can also mix this frosting with cocoanut, chocolate, lemon, etc., in making layer-cakes. ELLA BARTLETT-SAMMONS.

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FARM SELECTIONS

THE CATTLE TRADE IN KANSAS

MR. YOUNG, British vice-consul in Kansas, in a report recently issued on the great cattle trade of that state says that under Kansas for this purpose must be included Oklahoma, the Panhandle of Texas, and other districts, the cattle being moved from one to the other to suit changing conditions, so that the same cattle are at one time running on the open ranges of New Mexico, and at another fed in the maize and Indian-corn fields in eastern Kansas. The region has three sections from the point of view of cattle-rearing: One, like eastern Kansas, which is rich, well watered, with an abundant rainfall, and ample crops of Indian corn for feeding. Here the blue-grass of Kentucky, corresponding to the fresh sweet grass of England, has been introduced. The second, of which central Kansas is typical, has an uncertain rainfall, valuable feeding-crops along the stream, and none which can be relied on in the upland districts, where, however, a valuable grazing-grass, known as blue-stem, is produced, which, with the hard quality of the water arising from the limestone in the district, causes a hardness of growth, enlarging and strengthening the frame and putting the cattle in excellent condition for fattening for the market. The third area includes land which is valueless for anything but grazing, rarely producing anything but grasses, especially a variety known as buffalo-grass.

The amount of grazing in each district varies widely; in the arid regions of New Mexico it is not safe to allow less than eighty acres to each animal, although in a very wet season good grazing may be obtained. In the Panhandle district of Texas ten to fifteen acres are usually enough, while in the blue-stem country three or four acres a head are sufficient. It is impossible to give statistics of the trade, as the cattle are moved about so much, frequently changing hands by the way; but a large part of all the produce of the state is devoted to feeding cattle. The tendency all over the Western states of late years has been to improve the breed to the very highest point, the increase in the meat yielded by each animal compensating for the initial expense. The most popular breed at present is the Hereford, while the Short-horns and Polled Angus are also favorites. The breeding of registered bulls has now become a recognized branch of the industry. Indian corn is the great staple grain food, and most farmers prefer to keep it for feeding to selling it. When the crop is ready they buy cattle, usually three-year-olds, borrowing the money for the purpose. The Indian corn and other crops are then given to the cattle, which are sold when ready for the market. Scientific feeding now receives much attention, and the increasing growth of alfalfa, to supplement the Indian corn, is a boon to the cattle industry. Kafir-corn, sorghum, soy-beans, clover, millet, etc., are also used. The chief market is Kansas City, where cattle are sent fresh from the grass and also full fed for killing. The grass-fed cattle are bought by farmers or feeders, who send them out for fattening and bring them back when ready. The arrangements of the yards are excellent for feeding and watering the cattle, as well as to enable buyers to examine them easily, and also for their speedy reception and removal. On the whole the vice-consul thinks the whole of the southwestern parts of the United States specially suited for the cattle industry. "In the western portions excellent grazing is afforded in a country of little value for agriculture, while in the country tributary to Kansas City there is also abundant agricultural land largely used for the growth of crops consumed in cattle-feeding, while the facilities afforded by Kansas City as a market for mature cattle for beef are unexcelled, and everything is arranged to accommodate the cattle-men who operate an industry of so vast an importance to the whole district."—Farm and Home (London).

IRRIGATION FOR THE EAST

The office of experiment stations of the United States Department of Agriculture has issued Bulletin No. 87, entitled "Irrigation in New Jersey." It was prepared by Professor E. B. Voorhees, of the New Jersey Experiment Station, and describes his experiments in irrigation for the season of 1899. It is generally thought that the necessity for irrigation in the United States exists only in the region west of the Mississippi River, but repeated crop failures in the East and successful farming in the West have called attention to the importance of controlling the moisture of soils rather than accepting the conditions as they exist. Professor Voorhees estimates the loss to the hay crop of New Jersey from the drought in May and early June, 1899, at \$1,500,000, while small fruits and vegetables were even more seriously affected than the grasses. The records kept by him at the experiment station show that "in 1897 and 1898, years of abundant rainfall in April and May, the yield of hay averaged 2.65 tons an acre. In 1899 it was but a fraction over 1 ton, owing to the deficiency of rainfall in April and May, at the low price of \$10 a ton, a loss for the twenty-five acres of over \$400. The yield of crimson clover forage for 1897 and 1898 was 8.5 tons an acre; in 1899 the yield was but 5 tons, or in a good year the yield was seventy per cent greater. The deficiency in the rainfall at the critical period was alone responsible for this difference in yield. Oat and pea forage in 1897, and the early seeding of 1898, averaged 6 tons an acre; in 1899 the yield was but 3.3 tons an acre."

To show the frequency of such droughts as that of 1899 the bulletin cites the rainfall records of Philadelphia: "The rainfall records in Philadelphia from 1825 to 1895 (seventy years) show that in eighty-eight per cent of the years there was a deficiency of over one inch for one month, or that in sixty-two years out of the seventy there was one month in the growing season from April to August in which such a marked deficiency occurred as to cause a serious shortage of crop, and that for the same period there were thirty-nine years in which the deficiency extended throughout two months, while in twenty-one years it extended throughout three months; or in thirty per cent of the years included in this record there were three months during the growing period in which the average rainfall was deficient one inch or more. It is thus observed that a wide series of crops would be likely to suffer in more than one half of the years for which the record is available, while a still larger number would suffer in nearly one third of the years, for it must be remembered that even a slight deficiency in one month may result in serious reduction in yield, and consequent loss if it occurs at a time when the crop is making its largest development."

The experiments conducted by Professor Voorhees and reported in this bulletin were for the purpose of determining whether irrigation during these short periods of drought would result in sufficient increase of yield to pay for the works necessary to obtain the supply of water. The tests were made on small fruits.

The yields of the irrigated plats over and above those not irrigated were as follows: Blackberries, 1,038 quarts an acre, worth \$93.42; raspberries, 329 quarts an acre, worth \$32.90; currants, 852 quarts an acre, worth \$85.20. The increase in yield would not be so marked every year as in 1899, as the drought of that year was exceptional.

The bulletin contains detailed descriptions and statements of cost for a number of small irrigation-plants in New Jersey. All of these are pumping-plants. The cost of plants large enough to supply ten acres of small fruits and garden crops has varied from \$230 to \$500.

So far as climatic conditions are concerned New Jersey may be considered typical of the whole eastern half of the United States. Judging from the results reported in this bulletin there is no question but that irrigation for fruits and market-gardens is a profitable undertaking.

THE FERTILITY PROBLEM

Prof. E. B. Voorhees, author of one of the very best text-books dealing with soil fertility, addressing his old neighbors at the Gledinster Institute, urged that they look first to the natural strength of the land and to farm manures for plant-food. In general farming on a naturally strong soil he believes that commercial fertilizers should not be needed in any large amount. He placed the emphasis on nitrogen-gathering crops, saving of manures, tillage and keeping the ground covered. In nine tenths of all clover failures he believes the cause may be found in absence of living organisms favorable to clover. This is due very often to too much acid in the soil, and lime is the corrective. Some lime, he thinks, should be added occasionally to nearly all soils.

Lime is rarely needed as food, the Professor says, but it improves the mechanical condition of the soil, corrects acidity and favors the right kind of organisms. The soil is full of life, and fertility is secured through their agency. Cow-peas he values highly; likewise crimson clover for New Jersey. On the college farm it is sown in the corn, and plowed under in the spring for another corn crop. Each year the yield of corn on this field increases. He is adding organic matter that is rich in nitrogen, and the corn each year must surpass the previous year, if the season is not distinctly unfavorable, till the point is reached that no addition of humus is required.

Keep the ground covered; keep some crop growing; make the soil sweet by underdrainage and lime; save all the manure and apply quickly; make the soil fine, so that fertility may be unlocked, and depend upon commercial fertilizers in special conditions actually demanding them—this was the teaching of New Jersey's great authority on soil fertility.—Alva Agee, in National Stockman and Farmer.

CENSUS FARMING FIGURES

The last census shows that the far Western states have stopped their rapid growth in population. Just after the Civil War many of the old soldiers from both armies went West after new homes. The railroads helped this movement along, and the country west of the Missouri gained so fast that some of the wisest men in America were deceived. They really thought that the new West would soon overshadow both the old North and the old South. Thus it was that the roving, adventurous element among the New England people pushed on for the new country. Millions of dollars, representing the savings of the common people, followed them for investment. Up to ten years ago the growth in wealth and population was tremendous. Now the tide seems to have turned, for during the past ten years the northeastern states have gained much faster than the West. It will not do to say that this growth has been made chiefly in the manufacturing towns and cities. The figures show that the agricultural sections of the East are also making a larger gain than the section of the Far West where farming is the chief business. Many agricultural counties in New York and New England which showed a loss in population at the census of 1890 now show a gain. For the past fifteen years the "Rural New-Yorker" has steadily maintained that after the great waves of the "boom" in Western farm-lands had settled to the calm level of practical business the advantages of a well-conducted Eastern farm would be more apparent than ever. We have full faith in the possibilities of the Eastern farm. There is more money to be made and more good to be done in draining the swamps and low places east of the Mississippi than in spending vast sums to irrigate the arid plains. That is a work that may well be left to our grandchildren.—Rural New-Yorker.

DEHORNED CATTLE are more peaceable, easier to fatten, more contented, and can be cared for easier than cattle with horns. While the operation may be painful, it is not so cruel as allowing large cattle with horns to harass the smaller animals.—Farm Journal.

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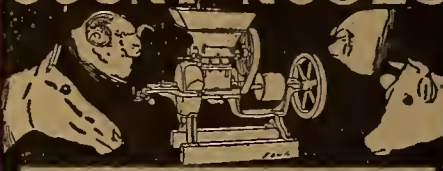
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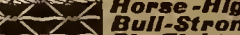
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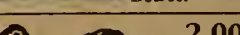


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FARM SELECTIONS

PUZZLED THE GERMAN

A FIRM of agricultural-machine makers in America recently issued some new show-cards representing the Goddess of Liberty, in scanty attire, driving a mowing-machine drawn by Bengal tigers. They sent a large number of them to their Berlin agent; but advertising art had no charms for that gentleman, as is shown by the following amusing letter of protest which he addressed to his employers:

"The picture of your admirable machines, of which I the receipt of ten thousand acknowledge, is not useful in this country, and it is of much regret to me that I request to return them permission. The women of our country, when by circumstances to do agricultural work compelled, do not dress as your picture shows is the custom in your wonderful country, and would not deem such garments with modesty to consist. Also we do not tigers for draft purposes cultivate, they not being to the country native, nor in our experience for such work well suited. I have to my customers explained with earnestness that your picture is a sinnbild (allegory), and does not mean that your admirable machine should be operated by women too little clothed; nor is it necessary that the place of horses shall by animals from the Zoologischer Garten be taken. I cannot use them as you instruct, and your further advices respectfully await."—London Agricultural Engineer.

BROAD MEANING OF THE WORD "JERSEY"

The use of the word "Jersey" on milk-wagons no longer occasions any remark. It has become so general that "Jersey" is commonly accepted as a synonym for "quality." So that the little deception in its use on Holstein milk-wagons may be condoned on the ground that it is used only figuratively. The latest manner of emphasizing the richness of the product of a certain local creamery and confectionery we notice in Indianapolis papers. This firm has reproduced from prints in the "Jersey Bulletin" the likeness of noted cows, and labeled them with signs, reading, "Try our butter-scotch," etc. Among the cows so reproduced we notice Mary Anne of St. Lambert, and Golden Lad's Jeannette.

Another example of the ends to which the word "Jersey" is appropriated is thus related in "Puck":

"Paw," asks little Zimmie, who has an inquiring mind, "what is a Jersey cow? I never saw one, did I?"

"Guess not," replied Farmer Hawbuck. "A Jersey cow, Zimmie, is any kind of a cow that gets killed by the cars."

Almost any railroad attorney will corroborate Brother Hawbuck's view. The predisposition of "Jersey cows" to get on the tracks has been a subject of deep study by these men.—Jersey Bulletin.

CATALOGUES RECEIVED

Eph Ruth, Poneto, Ind. Booklet, American Belgian-hare Culture. Price 25 cents.

F. E. Meyers & Bro., Ashland, Ohio. Illustrated catalogue of pumps and hay-tools.

Mica Crystal Co., Concord, N. H. Descriptive circular of Mica crystal grit for poultry.

L. C. Bliss & Co., 109 Summer St., Boston, Mass. Illustrated catalogue of the celebrated Regal shoe.

G. L. Taber, Glen St. Mary, Fla. Handsomely illustrated catalogue of the Glen St. Mary nurseries.

Keystone Mfg. Co., Sterling, Ill. Illustrated catalogue of the Keystone corn-husker and fodder-shredder.

Humphrey & Sons, Joliet, Ill. Illustrated booklet describing the Humphrey green bone and vegetable cutter.

Harlan P. Kelsey, Tremont Building, Boston, Mass. "Sang," or Ginseng, and cultural directions. Price 10 cents.

Luther Burbank, Santa Rosa, Cal. Illustrated circular describing the new Australian "Crimson Winter" rhubarb.

William Clave's Sons, Rising Sun, Ind. Descriptive circular of the Dixie Pea Harvester, a machine for harvesting cow-peas.

The Marlin Fire Arms Co., New Haven, Conn. Illustrated price list of Marlin repeating-rifles, carbines, muskets, shot-guns, ammunition, reloading-tools, etc.

THE MANURE QUESTION

A MANURE-YARD.—After arranging the stables so as to save all the liquid and solid excrement, we next want to make a proper manure or barn yard in which to keep the manure until needed to feed some crop. A roof is a necessity over a manure-heap. It is also well to see to the bottom. A puddled clay floor is very good, and with a roof over it, so no liquid can get on it but the liquid manure, we can very readily save all, especially if we use bedding or absorbents freely. A roof over the barn-yard will pay for itself in a very short time. It serves other purposes besides saving the manure, making an excellent shelter for the cattle, protection in winter and shade in summer. I have simply a shed roof against the barn closed up on three sides and open to the south, where the winter-afternoon sun has full advantage and all the cold northern and western wind-storms are cut off. The cover should be large enough so the manure can be spread out flat and the cattle allowed to tramp it solid, because the more solid it is the better the air is excluded and the slower and more uniform will be the fermentation and the more valuable the manure when applied. The manure from different animals should be well mixed; that is, spread out in thin layers over the entire heap. Where plenty of bedding is used, all the liquid that drains to the eud of the stable gutters may be sprinkled over the heap, and that will generally furnish enough moisture to completely rot the absorbents, and in a few months form a uniform mass of fertilizing material worth three dollars and fifty cents or more a ton; and it does not hold a very large per cent of rain-water, compelling us to haul loads and loads of useless water, to "irrigate" our fields with a manure-fork," as is always the case in the open yard.

THE MANURE-SPREADER.—After years of practical experience I find that the manure-spreader is an indispensable implement on the farm where much manure has to be handled. With it two men with two horses will handle twenty to thirty tons a day, and distribute it so regularly and completely that every plant will get its share of the plant-food. The manure-spreader is one of the best-paying implements I have on the farm. If well cared for, sheltered, oiled and kept in good running trim it will do satisfactory work in any manure. It is a very good practice to apply the manure as a top dressing whenever practicable. I use the short, or three-year, rotation—first year corn, second year wheat, third year clover. On the wheat and clover I use the manure as a top dressing entirely. For the corn I plow the manure in, not under, as is too often done. In the orchard, on the small fruit and some other crops I prefer it as a top dressing.—L. W. Lightly, in National Stockman and Farmer.

IMPROVEMENT OF THE HERD

A most instructive illustration of the advantage to be derived from "breeding with a purpose" is afforded by the milk records of the herd of dairy-cows kept in connection with Cornell University. Starting close onto thirty years ago with a herd of about twenty cows, which were only capable of producing an average of about twenty-four hundred pounds of milk in the year, an effort was made to so cross and select these animals and their progeny as to improve their milk-producing capacities from year to year. A beginning was made by using bulls of well-known milking strains, and little by little the milking capabilities of the cows were steadily improved, until at the present time the record of the twenty odd cows kept in the herd (all of them descendants of the original twenty, which only averaged twenty-four hundred pounds of milk) works out to close on sixty-four hundred pounds per annum! All this was accomplished by the combined results of crossing with bulls of good milking strains and the careful selection for breeding purposes of animals whose dams had specially distinguished themselves as milkers. What has been done here is capable of achievement by every farmer who lays his mind down to that end and operates accordingly.—Hoard's Dairyman.

GROWING ALSIKE CLOVER

There has been several articles lately in "Gleanings" on Alsike clover. I have been familiar with this plant several years, and will give you my experience with it both as a farmer and bee-keeper. It is the hardiest of all the clovers, thrives on almost any soil, but gives better results in soils containing some clay than in soils that are more of a sandy nature. It makes quite a luxuriant growth in land too wet to grow red clover at all. The roots do not heave out of the ground in spring, as other clovers often do; therefore, it has never been known to winter-kill in our locality, while last winter fully ninety per cent of the red clover here was killed. Some fields near me were sown two years ago with red and Alsike mixed, half of each; but now very few plants of the red clover are to be found in those fields, while the Alsike still flourishes as though it were a native of the soil.

For sowing with timothy it cannot be equaled by any other variety. This combination makes as heavy a hay crop as any; but the advantage of the Alsike is it is as easily cured as the timothy, and retains its beautiful bright green color in the hay, which is sometimes difficult to get in the red varieties. It remains green and succulent for a long time after the seed has fully matured, so it does not require harvesting "just at the right time," as is the case with other varieties.

As to the feeding value, I think it superior to any other kind, and my neighbors all agree with me on this point. The stalks not being coarse and woody it is eaten absolutely clean by all kinds of stock, there being no waste.

Some farmers claim it does not make as good an after-growth as the red during dry seasons, but I can see no great difference in this respect. The dairy-farmers in some parts of this state prefer to mix the seed in equal portions, claiming that they get the best results in this way.

The seed may be sown in spring grain. This gives best results in our part of the state with all varieties of clover. Good catches are also usually had by sowing on winter rye or wheat in early spring before the frost is all out. We also sometimes sow on old timothy meadows with good results in early spring.

Mixed with timothy, four pounds an acre of the Alsike is sufficient; Alsike alone, six to eight pounds an acre, or about half the amount usually sown of other kinds. I have four acres that were sown two years ago, six pounds to the acre, and the clover now stands a little thicker on the ground than I like to have it.

Those who will sow red clover should always mix some Alsike with it. The Alsike, being more hardy, occupies the spaces where the red fails to grow. When we sow with timothy we sow two quarts of Alsike and six quarts of timothy an acre.

Last season, up to June 27th, we had the worst drought ever known in this part of the state. Under these unfavorable conditions the Alsike made the best and largest hay crop of all our grains. This, it seems to me, would indicate it would do well in warmer climates than ours.

Alsike clover is the best honey-plant we have in northern Wisconsin. I have never known it to fail to yield nectar abundantly since it was first grown here, about ten years ago. During the severe drought last June it was the only plant here our bees worked on, white clover being an entire failure with us. My forty-two colonies stored thirty pounds each from the first crop. After July 1st we had abundant rains and warm weather, and the bees worked on the after-crop and stored honey from the Alsike. My plan has been to encourage my neighbors to sow Alsike by making as a present to each member of the family a nice section of Alsike honey, telling them that it was a small portion of the honey my bees gathered from their clover. All bee-keepers should so encourage their neighbors by giving them a taste of the honey that has been so gathered, or at least by donating them enough seed to give it a trial.—William Robinson, in Gleanings in Bee Culture.

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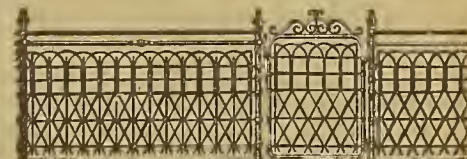
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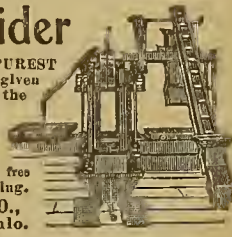
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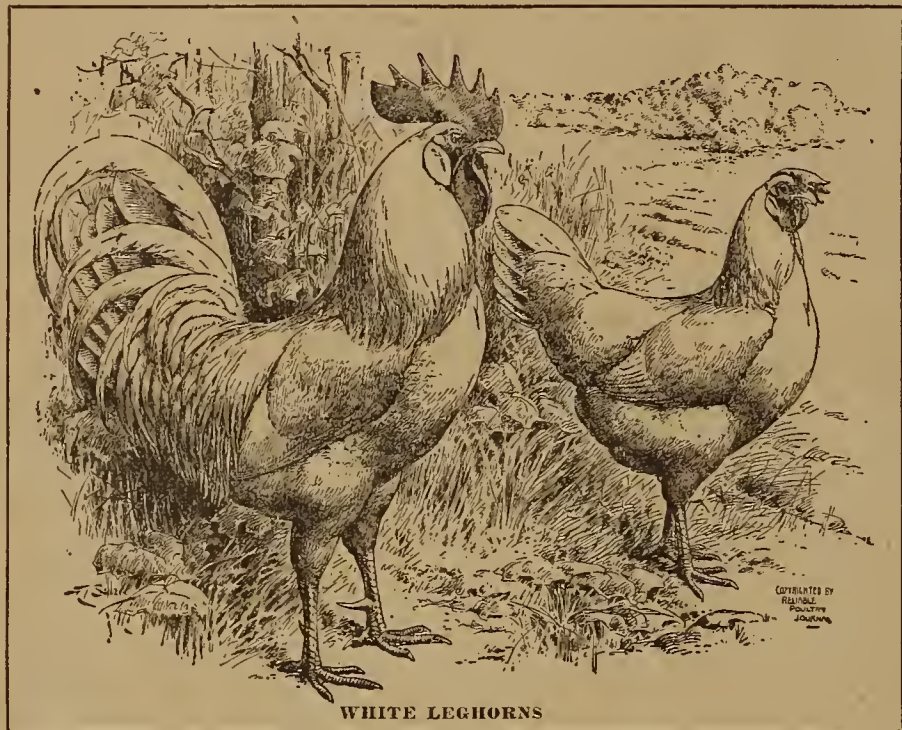
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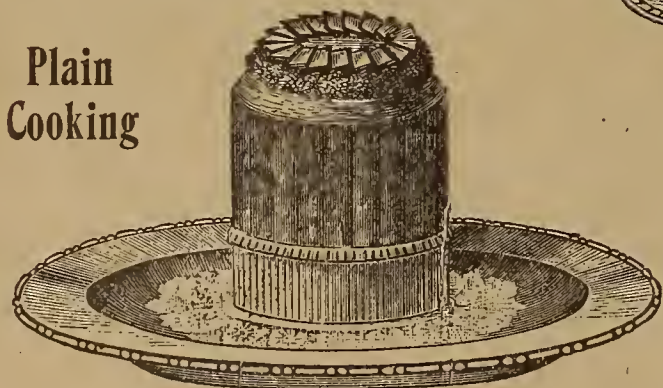
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St. JOHN, 21.

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sitting, the one at the head, and the other at the feet, where the body of Jē-sūs had lain.

13 And they say unto her, Woman; why weepest thou? She saith unto them, Because they have taken away my Lord, and I know not where they have laid him.

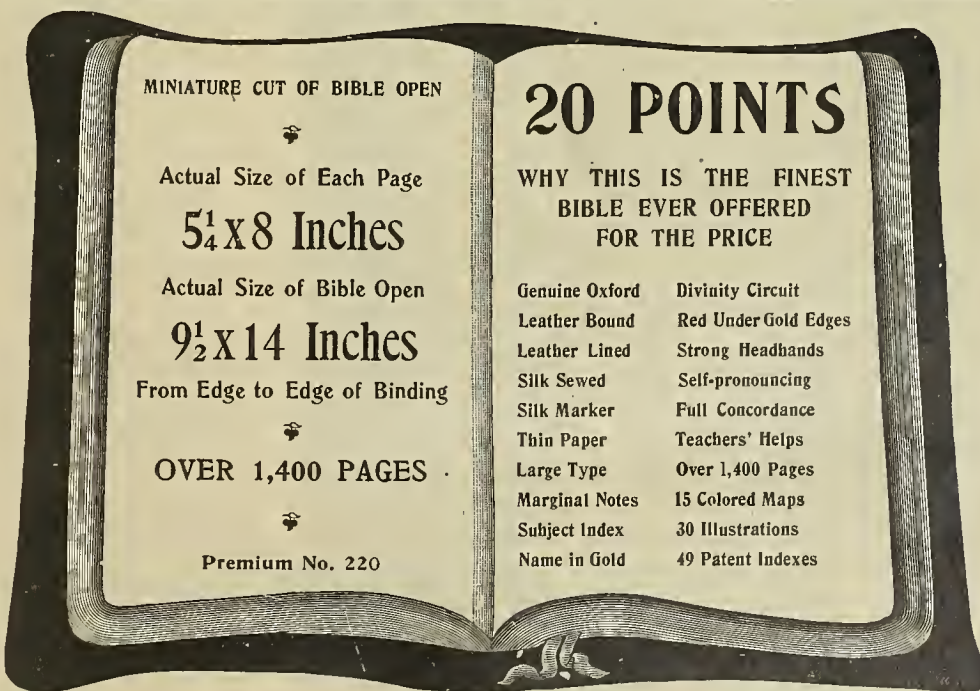
A.D. 33.

them: then came Jē-sūs, the doors being shut, and stood in the midst, and said, Peace be unto you.

27 Then saith he to Thom'-ās, Reach hither thy finger, and behold my hands; and reach hither thy hand, and thrust it into my side: and be not faithless, but believing.

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